

TRANSACTIONS

of the

NINETY-FOURTH ANNUAL MEETING

of

The Canadian Medical Association

THE NINETY-FOURTH ANNUAL MEETING of The Canadian Medical Association was held in Montreal, June 19-23, 1961. All sessions were held in The Queen Elizabeth Hotel.

Twelve affiliated national medical societies and related groups held their annual meetings in close proximity to that of the C.M.A. A total of 1624 members, 519 ladies and 442 representatives of exhibitors, press, radio and television registered at the meeting.

The business of The Association was transacted at meetings of the Executive Committee on June 16, 17 and 22 and at two and one-half days of sessions of the General Council June 19-21, which are fully reported in these Transactions.

Medical Week in Montreal was initiated by religious services as follows:

Jewish services: Friday, June 16, Temple Emanu-El, and Saturday, June 17, Congregation Shaar Hashomayim.

Roman Catholic services: Sunday, June 18, Mary Queen of the World Cathedral.

Protestant service: Sunday, June 18, Dominion Douglas United Church.

The scientific program commenced on Tuesday, June 20. A feature of the structure of the program was the reduction in the number of didactic presentations and sectional meetings and the substitution of Teaching Sessions in the form of panel discussions of assigned topics. The innovation proved to be attractive to large audiences, which is a tribute to the calibre of the discussants who represented all parts of Canada.

Distinguished guest speakers who contributed to the General Sessions were Dr. Hugo Rosenqvist of Stockholm, who delivered the Lister Lecture, Dr. Maurice Mayer of

Paris, Dr. Leroy D. Vandam of Boston and Dr. C. Miller Fisher of Boston.

The widespread interest in medico-socio-economic affairs was recognized by the arrangement of an Economics Day program on Friday, June 23, unopposed by any counter-attraction in the scientific sessions. Panel discussions of current economic problems and authoritative presentations of health insurance developments abroad attracted a capacity audience throughout the day. A feature of the program was the appearance of Chief Justice Emmett M. Hall of Saskatchewan, Chairman of the Royal Commission on Health Services. As the personnel and terms of reference of the Royal Commission had been announced only three days earlier, the presence of the Chairman was timely and his remarks were listened to with close attention.

The social activities of the meeting included a Get-Acquainted coffee party on Sunday evening, June 18; a Wine-Tasting Party at the Montreal Museum of Fine Arts on Monday evening, June 19; a Reception and Dinner to the General Council on Tuesday evening, June 20, at which the Honourable Jean Lesage, Premier of Quebec, was the principal speaker; the Dance which followed the Annual General Meeting on Wednesday, June 21; and a Reception and Supper tendered by the City of Montreal at the Chalet on Mount Royal on Thursday evening, June 22. A full program of entertainment for the ladies attending the meeting was interspersed among the social events listed above.

On Monday, June 19, the General Council assembled at luncheon to hear the Valedictory Address of the retiring President, Dr. R. MacGregor Parsons. The business of the Annual Meeting of the Quebec Division of the C.M.A. was conducted at a luncheon meeting on Thursday, June 22; and on Friday, June 23, a luncheon arranged by The

Canadian Medical Protective Association was addressed by G. P. R. Tallin, Q.C., Dean of the Law School at the University of Manitoba.

THE ANNUAL GENERAL MEETING

The Annual General Meeting was convened in the Grand Ballroom of the Queen Elizabeth Hotel at 8.30 p.m. on Wednesday, June 21. The President, Dr. R. MacGregor Parsons, was in the chair. Among the distinguished guests included in the platform party were the Honourable Dr. Alphonse Couturier, Minister of Health, Quebec; the Reverend R. Douglas Smith, D.D.; Dr. Milford O. Rouse, Dallas, Texas, Official Delegate of the American Medical Association; Dr. Emile Blain, Montreal, Official Delegate of l'Association des Médecins de Langue Française du Canada; Dr. D. B. Stewart, Kingston, Official Delegate of the Jamaica Branch of the British Medical Association; Mrs. William Mackersie, President of the Women's Auxiliary of the American Medical Association; Dr. Hugo Rosenqvist, Stockholm, Lister Lecturer; Dr. Leroy Vandam, Dr. C. Miller Fisher and Dr. Maurice Mayer, guest speakers; Dr. Wilbrod Bonin, Dean of the Faculty of Medicine, University of Montreal; Dr. J.-B. Jobin, Dean of the Faculty of Medicine, Laval University; Dr. D. A. Thompson, President, Royal College of Physicians and Surgeons of Canada; Dr. E. C. McCoy, President, College of General Practice of Canada; Dr. Eva C. Arendt, President, Federation of Medical Women of Canada; and the recipients of the honour of Senior Membership.

The invocation was pronounced by the Reverend R. Douglas Smith and the President welcomed the members and guests. The Official Delegates of the American Medical Association, l'Association des Médecins de Langue Française du Canada and the Jamaica Branch of the British Medical Association spoke briefly in bringing greetings from their respective Associations.

Honorary Membership in The Canadian Medical Association was conferred, *in absentia*, on His Excellency, Major General Georges P. Vanier, D.S.O., M.C., C.D., Governor General of Canada.

On behalf of their respective Divisions, the General Secretary presented for the honour of Senior Membership in The Canadian Medical Association the following distinguished members of the profession:

Dr. Morley Counsellor Bridgman, Oliver, B.C.
Dr. George Herbert Clement, Vancouver
Dr. Donald Faison McIntyre, Winnipeg
Dr. William James Deadman, Toronto
Dr. Donald Grant Dingwall, Dryden
Dr. Charles-Adolphe Bohémier, Montreal
Dr. David Sclater Lewis, Montreal
Dr. Wilder Graves Penfield, Montreal
Dr. Daniel Finlayson MacInnis, Shubenacadie, N.S.

Dr. Parsons then proceeded to conduct the installation of his successor in the Presidency, Dr. G. W. Halpenny of Montreal. After sketching Dr. Halpenny's career and paying tribute to his endeavours in organized medicine, the badge of office was transferred and Dr. Halpenny assumed the chair as President of The Canadian Medical Association.

In a brief address, Dr. Halpenny accepted the responsibilities of office in these momentous times, thanked his colleagues of both races in the Quebec Division of the C.M.A. and pledged his best efforts for the continued progress of The Association. As his first official act, he conferred upon his predecessor, Dr. MacGregor Parsons, the Past President's badge and conveyed to him the gratitude of the membership for his devotion to the duties of the

office. Mrs. Parsons was conducted to the platform and was presented with a pin designed on the basis of the C.M.A. crest to indicate the thanks of The Association for her efforts during her husband's term as President. This was the first occasion that such tangible recognition has been afforded to the President's lady. Subsequent to the Annual Meeting, similar pins have been presented to all surviving wives of the Past Presidents.

Dr. Wilder Penfield, who had just received the honour of Senior Membership, then reciprocated by presenting to The Association a unique gavel. Fashioned from wood from the plane tree under which Hippocrates taught, the base in Canadian maple, is carved to represent the outline of the island of Cos. Dr. Penfield, in a graceful speech, explained the historical significance of his gift, and Dr. Halpenny, on behalf of The Association, accepted it as a valuable addition to our possessions.

After the singing of the National Anthem, the Annual General Meeting was adjourned and Dr. and Mrs. Halpenny received the guests and members.

THE GENERAL COUNCIL

The General Council of The Canadian Medical Association met in the Grand Ballroom of the Queen Elizabeth Hotel, Montreal, on June 19, 20 and 21, 1961.

The following members of the General Council answered the roll call:

Drs. D. J. Albert, Edmunston, N.B.; F. G. Allison, Winnipeg, Man.; J. F. C. Anderson, Saskatoon, Sask.; W. S. Anderson, Edmonton, Alta.; G. W. Armstrong, Ottawa, Ont.; R. D. Atkinson, Waterloo, Ont.; J. A. Baird, Port Coquitlam, B.C.; W. W. Baldwin, Brooklin, Ont.; P. J. Banks, Victoria, B.C.; C. J. W. Beckwith, Halifax, N.S.; N. J. Belliveau, Montreal, P.Q.; Stanley C. Best, Regina, Sask.; J. Howard Black, Vancouver, B.C.; H. J. Blackwood, St. John's, Nfld.; N. J. Blair, Vancouver, B.C.; J. P. Bourque, Montreal, P.Q.; Edmond A. D. Boyd, Vancouver, B.C.; L. O. Bradley, Winnipeg, Man.; Wm. Bramley-Moore, Edmonton, Alta.; P. Bruce-Lockhart, Sudbury, Ont.; C. W. Burns, Winnipeg, Man.; W. E. Callaghan, Summerside, P.E.I.; G. D. W. Cameron, Ottawa, Ont.; H. E. Christie, Amherst, N.S.; S. D. Clark, Lancaster, N.B.; C. A. Coady, Charlottetown, P.E.I.; J. U. Coleman, Duncan, B.C.; Paul-E. Cote, Sillery, P.Q.; G. E. Craig, Montreal, P.Q.; John N. Crawford, Ottawa, Ont.; C. H. Crosby, Regina, Sask.; E. F. Crutchlow, Montreal, P.Q.; J. W. Dales, Clarkson, Ont.; H. D. Dalgleish, Saskatoon, Sask.; I. W. Davidson, Toronto, Ont.; R. C. Dickson, Halifax, N.S.; A. A. Dixon, Calgary, Alta.; R. A. Dolan, Hamilton, Ont.; E. F. Donald, Edmonton, Ont.; T. S. Dougan, Sussex, N.B.; M. S. Douglas, Windsor, Ont.; J. B. Downing, Summerside, P.E.I.; René L. Duberger, Sherbrooke, P.Q.; M. R. Dufresne, Montreal, P.Q.; Roger Dufresne, Montreal, P.Q.; R. S. Duggan, St. David's, Ont.; F. A. Dunsworth, Halifax, N.S.; E. Durocher, Windsor, Ont.; F. W. DuVal, Winnipeg, Man.; G. S. Fahrni, Vancouver, B.C.; H. G. Fletcher, London, Ont.; Gordon H. Francis, Vancouver, B.C.; J. H. Gibson, Sarnia, Ont.; A. A. Giffen, Kentville, N.S.; Gustave Gingras, Montreal, P.Q.; Norman H. Gosse, Halifax, N.S.; D. A. Graham, Toronto, Ont.; Donald C. Graham, Toronto, Ont.; James H. Graham, Ottawa, Ont.; J. M. Graham, Blenheim, Ont.; Arthur R. Grant, Summerside, P.E.I.; D. K. Grant, Toronto, Ont.; F. J. Granville, Stellarton, N.S.; L. M. Greene, Prince Rupert, B.C.; L. C. Grisdale, Edmonton, Alta.; A. A. Haig, Lethbridge, Alta.; T. R. Hale, Montreal, P.Q.; G. W. Halpenny, Montreal, P.Q.; R. C. Harrison, Edmonton, Alta.; Eric Pike, St. John's, Nfld.; T. M. Heringer, Port Arthur, Ont.; F. S. Hobbs, Vancouver, B.C.; C. D. Kean, St. John's, Nfld.; C. J. Houston, Yorkton, Sask.; R. M. Jones, Toronto, Ont.; C. W. L. Jeanes, Ottawa, Ont.; B. L. Jewett, Fredericton, N.B.; J.-B. Jobin, Quebec, P.Q.; A. M. Johnson, Vancouver, B.C.; Ed. Johnson, Winnipeg, Man.; K. I. Johnson, Pine Falls, Man.; R. O. Jones, Halifax, N.S.; Guy Joron, Montreal, P.Q.; Gordon A. Judge, Burford, Ont.; A. D. Kelly, Toronto, Ont.; J. W. Kettlewell, Edmonton, Alta.; M. K. Kiernan, Winnipeg, Man.; M. O. Klotz, Ottawa, Ont.; John E. Knox, Maple Creek, Sask.; T. A. Laidlaw, Charlottetown, P.E.I.; R. C. Laird, Toronto, Ont.; F. S. Lawson, Regina, Sask.; Sylvio LeBlond, Chicoutimi, P.Q.; Peter O. Lehmann, Vancouver, B.C.; Renaud Lemieux, Quebec, P.Q.; N. N. Levine,

Toronto, Ont.; D. Sclater Lewis, Montreal, P.Q.; J. O. Lockhart, Hamilton, Ont.; T. M. Lockwood, Port Credit, Ont.; E. Kirk Lyon, Leamington, Ont.; W. Stuart Maddin, Vancouver, B.C.; M. L. Mador, Sudbury Ont.; M. R. Marshall, Edmonton, Alta.; J. F. Meakins, Montreal, P.Q.; H. Paul Melanson, Moncton, N.B.; O. B. Millar, Scarborough, Ont.; H. S. Mitchell, Montreal, P.Q.; Fernand Montreuil, Montreal, P.Q.; D. F. Moore, Saskatoon Sask.; H. V. Morgan, Calgary, Alta.; H. S. Morton, Montreal, P.Q.; G. W. Mylks, Kingston, Ont.; M. R. MacCharles, Winnipeg, Man.; E. C. McCoy, Vancouver, B.C.; R. H. McCreary, Arnprior, Ont.; J. D. McCutcheon, Lethbridge, Alta.; R. G. MacDonald, Saint John, N.B.; S. A. MacDonald, Montreal, P.Q.; C. R. MacDowall, Carleton Place, Ont.; M. T. Macfarland, Winnipeg, Man.; Paul McGoe, Toronto, Ont.; J. F. McInerney, Fredericton, N.B.; F. P. McInnis, Toronto, Ont.; Surgeon Rear Admiral T. Blair McLean, Ottawa, Ont.; N. K. MacLennan, Sydney, N.S.; J. J. McManus, St. Thomas, Ont.; J. A. McMillan, Charlottetown, P.E.I.; H. L. McNicol, Flin Flon, Man.; J. Harris McPhedran, Toronto, Ont.; Cluny Macpherson, St. John's, Nfld.; D. F. McPherson, Lethbridge, Alta.; S. N. Nathan, Weston, Ont.; W. S. Neal, Winnipeg, Man.; F. L. O'Dea, St. John's, Nfld.; R. MacGregor Parsons, Red Deer, Alta.; G. W. Peacock, Saskatoon, Sask.; A. F. W. Peart, Toronto, Ont.; T. S. Perrett, Vancouver, B.C.; Eric Pike, St. John's, Nfld.; H. A. L. Portnuff, Yorkton, Sask.; Thomas Primrose, Montreal, P.Q.; L. E. Prowse, Charlottetown, P.E.I.; T. J. Quintin, Sherbrooke, P.Q.; L. R. Rabson, Winnipeg, Man.; D. I. Rice, Halifax, N.S.; R. W. Richardson, Winnipeg, Man.; J. B. Roberts, St. John's, Nfld.; J. Robichon, Ottawa, Ont.; K. E. Rogers, St. Catharines, Ont.; J. Donovan Ross, Edmonton, Alta.; R. F. Ross, Truro, N.S.; T. C. Routley, Toronto, Ont.; J. O. Ruddy, Whitby, Ont.; Glenn Sawyer, Toronto, Ont.; M. M. Sereda, Edmonton, Alta.; F. Hartley Smith, Winnipeg, Man.; Leighton Smith, Montreal, P.Q.; Lloyd G. Stevenson, Montreal, P.Q.; E. R. Stewardson, Moose Jaw, Sask.; C. B. Stewart, Halifax, N.S.; E. Stiles, St. Stephen, N.B.; George J. Strean, Montreal, P.Q.; J. B. I. Sutherland, Westmount, P.Q.; K. D. Symington, Calgary, Alta.; A. C. Taylor, Regina, Sask.; R. K. Thomson, Edmonton, Alta.; C. L. Tisdale, Prince Albert, Sask.; Wallace Troup, Ottawa, Ont.; K. R. Trueman, Winnipeg, Man.; H. M. Twomey, Botwood, Nfld.; A. F. VanWart, Fredericton, N.B.; J. B. Wallace, Prince Albert, Sask.; W. K. Welsh, Toronto, Ont.; F. L. Whitehead, East Riverside, N.B.; W. D. Whyte, Peterborough, Ont.; W. W. Wigle, Dryden, Ont.; F. W. Wigglesworth, Montreal, P.Q.; F. H. Wigmore, Moose Jaw, Sask.; J. G. Williams, St. John's, Nfld.; G. E. Duff Wilson, Kitchener, Ont.; G. E. Wodehouse, Toronto, Ont.; R. Woolstencroft, Calgary, Alta.; M. A. R. Young, Lamont, Alta.

The Chairman, Dr. M. S. Douglas, welcomed the members to the sessions of the General Council. He expressed the hope that members would accept the new alphabetical seating arrangement as an endeavour to remove any appearance of sectionalism in the deliberations of this representative national body. He outlined the press arrangements and requested each Chairman to report for a press conference after his committee report had been dealt with.

Dr. G. W. Halpenny, President-Elect, extended a warm welcome to the Province of Quebec and the City of Montreal. He outlined the efforts of the committees of the Quebec Division in their arrangements for the meeting and said that he was confident that the whole program would be conducted with efficiency.

APPOINTMENT OF THE RESOLUTIONS COMMITTEE

*Moved by Dr. R. M. Parsons,
seconded by Dr. C. H. Crosby,*

*that a Resolutions Committee be appointed by the
Chair.*

-Carried

*The Chairman appointed Dr. T. J. Quintin, Dr.
F. A. Dunsworth and Dr. R. K. Thomson to this Committee.*

REPORT OF THE COMMITTEE ON ARCHIVES

Mr. Chairman and Members of the General Council:

1. One of the duties of the Committee on Archives is to record the deaths of members of The Association and to report them to this General Council. During The Association year just closing, the grim reaper has been active, and among the victims was Dr. J. B. Ritchie, Chairman of the Committee on Archives, who would have been presenting this report.

2. With deep regret we record the deaths of the following colleagues and C.M.A. members since the last Annual Meeting and ask this General Council to stand for a minute in silence out of respect to their memory:

John A. I. Alton, Lamont, Alta. (Life Member Alberta Division)
Bruce F. Anderson, Alliston, Ont.
Charles L. Balf, Kamloops, B.C.
Stanley S. Ball, Stouffville, Ont.
Adam Alexander Beatty, Toronto, Ont.
Thomas Arnold Bell, Calgary, Alta.
James E. Bloomer, Moose Jaw, Sask. (Senior Member C.M.A., Life Member Saskatchewan Division)
Francis E. Boudreau, Moncton, N.B. (Life Member N.B. Division)
Andrew Cameron Bradford, Edmonton, Alta.
Lester Brehaut, Murray River, P.E.I. (Senior Member C.M.A.)
Jack Brenner, Winnipeg, Man.
Alan G. Brown, Toronto, Ont. (Senior Member C.M.A.)
Gordon Burke, Vancouver, B.C. (Senior Member C.M.A.)
John Ainley Butler, Newcastle, Ont.
Frederick Todd Cadham, Winnipeg, Man. (Senior Member C.M.A.)
John L. Campbell, Saskatoon, Sask. (Life Member Saskatchewan Division)
Peter S. Campbell, Halifax, N.S. (Senior Member C.M.A., Honorary Member Nova Scotia Division)
Duncan Angus Carmichael, Ottawa, Ont.
Arthur F. Chaisson, Fredericton, N.B.
Alva Burton Chapman, Reston, Man.
George Douglas Chown, Mirror, Alta.
William Wesley Clements, Kelvington, Sask.
William A. Chestnut, Moosomin, Sask. (Senior Member C.M.A.)
Hugh Cochrane, Arnprior, Ont.
Theodore H. Coffey, Wilton Grove, Ont.
Jacob L. Cohen, Windsor, Ont.
Donald G. Coghlin, Brandon, Man.
Herbert B. Coleman, Willowdale, Ont.
William James Corrigan, Toronto, Ont.
Aaron James Couch, Mount Forest, Ont.
Andrew Robert Coulter, Sarnia, Ont.
Georges deBlois, Three Rivers, P.Q.
Arthur Ernest Doull, Jr., Halifax, N.S.
Thomas A. J. Duff, Toronto, Ont.
Arthur Frederick Dunn, Ottawa, Ont.
John Francis Dunn, Almonte, Ont. (Life Member O.M.A.)
Francis Louis Eberhart, Meaford, Ont. (Life Member O.M.A.)
Richard James Elvin, Vancouver, B.C.
George Hickling Evoy, Winnipeg, Man.
Frederick W. Fitzgerald, Lachute, P.Q.
Kurt Fuchs, Edmonton, Alta.
Leonard C. Gallagher, Huntsville, Ont.
Fernand Gauthier, Montreal, P.Q.
John Hardy Geddes, London, Ont.

Roy Wellington Graham, Oshawa, Ont.
 John Alexander Gunn, Winnipeg, Man. (Senior Member C.M.A.)
 Jules Philip Gussin, St. Boniface, Man.
 Fredric Wm. Hall, Chatham, Ont. (Life Member O.M.A.)
 Harold Parrish Hamilton, Waterloo, Ont.
 Rupert C. G. Hawkins, Halifax, N.S.
 Albert Hazell, Saskatoon, Sask.
 John Cooper Hindson, Viscount, Sask.
 Stanley Horn, Sherbrooke, P.Q.
 Richard E. Howey, Owen Sound, Ont.
 John Irwin Humphries, Windsor, Ont.
 Arthur Leonard Jacobs, The Pas, Man.
 David Scott Johnstone, West Vancouver, B.C. (Senior Member C.M.A., Life Member Sask. Division)
 Earl M. Jones, Jarvis, Ont.
 Thomas P. Kearns, London, Ont.
 Jules LaFleur, Lachute, P.Q.
 Richard Donald Lane, Port Elgin, Ont.
 J. C. K. Langford, Saskatoon, Sask. (Life Member Sask. Division)
 C. Hudson Leavens, Port Hope, Ont.
 Roman Bohdan Lyshak, Edmonton, Alta.
 John Mann, Toronto, Ont.
 Stephen Foster Millen, South Woodslee, Ont.
 Clifford Victor Mulligan, Toronto, Ont.
 Alexander J. Murchison, Charlottetown, P.E.I.
 James Howard Munro, Maxville, Ont.
 Joseph Earl Murphy, Regina, Sask.
 William Samuel Murphy, Smiths Falls, Ont.
 Sydney Stewart Murray, Vancouver, B.C.
 Frederic Cleophas Myers, Fonthill, Ont.
 Roderick J. MacDonald, St. Peter's Bay, P.E.I. (Senior Member C.M.A.)
 Percy Blakely Macfarlane, Hamilton, Ont.
 Thomas W. MacLean, Sarnia, Ont.
 William Arthur MacLeod, Hopewell, N.S. (Honorary Member N.S. Division)
 Gordon L. McGuffin, Calgary, Alta.
 Sarsfield M. Nagle, Ottawa, Ont.
 Robert Lloyd Nesbitt, Ottawa, Ont.
 Gregory Novak, Winnipeg, Man.
 John Hewins O'Neill, Downsview, Ont.
 Nicholas Asa Ost, Fort William, Ont.
 Rex Eldon Page, Vancouver, B.C.
 J. E. Horace Paiement, Sturgeon Falls, Ont.
 Ivan Young Patrick, Montreal, P.Q.
 John J. Perverseff, Vancouver, B.C.
 George A. Petrie, Vancouver, B.C.
 Thomas Reginald Pickard, Guelph, Ont.
 Marcus Grattan Regan, Edmonton, Alta.
 John Boyle Ritchie, Regina, Sask. (Senior Member C.M.A., Life Member Sask. Division)
 Robert W. Robertson, Edmonton, Alta.
 Alfred L. Russell, Bailieboro, Ont.
 Antonio Samson, Montreal, P.Q.
 Louis E. Sauriol, Cornwall, Ont.
 Thomas M. Savage, Guelph, Ont.
 William Henry Setka, Calgary, Alta.
 Leslie Ord Campbell Skeeles, Toronto, Ont.
 Cyrus William Slemmon, Bowmanville, Ont.
 John Surman Smit, Montreal, P.Q.
 Raymond Clare Smith, Toronto, Ont.
 Melville J. Sproul, Cornwall, Ont.
 Johann Martin Stiglmayr, Emerson, Man.
 Lorne James Stuart, Scotland, Ont.
 Harry Carver Swartzlander, Calgary, Alta. (Life Member Alberta Division)

Albert Edward Talbot, Calgary, Alta. (Life Member Alberta Division)
 James Taylor Thomas, Caledon, Ont.
 Walter Felix Tisdale, Winnipeg, Man.
 Sewart Austin Wallace, Kamloops, B.C.
 William Grant Waugh, Drayton Valley, Alta.
 Izchok Irwin Weisstub, Winnipeg, Man.
 Ernest Harold Whelpley, Winnipeg, Man.
 Azra Beson Wickware, Tomahawk, Alta. (Life Member Alberta Division)
 Joseph John Williams, Toronto, Ont.

3. The other major responsibility of the Committee on Archives relates to "the compilation and preservation of documents and reports of historical interest in the development of organized medicine in Canada". There is little doubt that Dr. Ritchie would have urged The Association and the Divisions to be active and diligent in the collection of historical material. He, by his efforts in the compilation of biographical data on early practitioners in the Old West, has provided the example to all of us. It is particularly important as we approach the hundredth anniversary of our founding that we recall and record the history of our profession and the stories of the men who made it. This involves the identification and encouragement of those among us who are interested in medical history, but it is not too much to expect that in each Division such enthusiasts will be found.

All of which is respectfully submitted.

A. D. KELLY,
General Secretary.

Personnel of the Committee:
Divisional Representatives:

Dr. J. H. MacDermot, Vancouver
 Dr. H. E. Rawlinson, Edmonton
 Dr. R. W. Kirkby, Prince Albert
 Dr. R. B. Mitchell, Winnipeg
 Dr. W. W. Wigle, Dryden
 Dr. H. E. MacDermot, Montreal
 Dr. A. D. Gibbon, Saint John
 Dr. C. M. Bethune, Halifax
 Dr. A. A. MacDonald, Souris
 Dr. C. Macpherson, St. John's

Moved by Dr. G. W. Halpenny,
seconded by Dr. R. M. Parsons,

That the Report of the Committee on Archives be adopted.

Carried

REPORT OF THE EXECUTIVE COMMITTEE

Dr. Douglas requested that Dr. N. H. Gosse, former Chairman of the General Council, assume the Chair during the presentation of the Report of the Executive Committee.

Mr. Chairman and Members of the General Council:

4. It is customary to refer to a year which is closing as an eventful one but The Association year 1960-61 can, with justification, be so termed. Opening as it did in the immediate aftermath of the heated election campaign in Saskatchewan, the year has presented more crises in medico-political affairs than any we have encountered in recent times. The Committees of The Association have been active in their duties as these Reports will attest

and your Executive Committee has been no exception. We would report that in carrying out its function as the representative of this General Council in supervising the business of The Association, the Executive Committee has met as follows:

June, 1960, in Banff
October, 1960, in Toronto
January, 1961, in Toronto
February, 1961, in Toronto
May, 1961, in Toronto

and as this report is being prepared we plan to meet June 16 and 17 in Montreal. At each meeting the Divisions have been represented by their members or their alternates, the officers and officials have attended all meetings, the Chairman of the Committee on Public Relations has been a regular guest and the Secretaries of the Divisions were special guests at the February meeting.

Adopted

ANNUAL MEETINGS

5. The 93rd Annual Meeting held in Banff, June 13-17, 1960 was notable for the excellence of the arrangements undertaken by the ladies and gentlemen of the Calgary Medical Society under the general chairmanship of Dr. R. MacGregor Parsons and Mrs. Parsons. The important business before the General Council was faithfully discharged despite the distractions of the mountain setting and the elaboration of the Statement on Medical Services Insurance will be recalled as an undertaking of great importance. The scientific program which occupied the last three days was of high calibre and the inclusion of a session on Medical Economics was an innovation which attracted widespread attention. Dr. E. R. C. Walker, Scottish Secretary of the B.M.A., and Mrs. Walker were the special guests of The Association and through them we attempted to demonstrate our thanks to our Edinburgh friends who had been so hospitable at the preceding Joint Annual Meeting in that city. Although our Royal President was unable to be present to install his successor, this final duty was carried out by his Canadian Deputy, Dr. Lyon, and Dr. R. MacGregor Parsons was welcomed to the Presidency by a taped message from His Royal Highness The Duke of Edinburgh. The gratitude of the C.M.A. is due to all members of the Alberta Division who made the Banff meeting such a notable occasion.

Adopted

6. This 94th Annual Meeting in Montreal offers the prospect of being an interesting and enjoyable one. Active committees of the Quebec Division have been at work for many months to prepare for us a program which provides for the discussion of our business, for the enlightenment of our minds and for the enjoyment of the cosmopolitan delights of Canada's metropolis. In an endeavour to implement some of the recommendations made a year ago for a recasting of the pattern of our Annual Meeting, the local program committee has reduced to the minimum the didactic scientific presentations and in their place has provided a wealth of Teaching Sessions. The importance of medical economics in our current thinking and the interest of the membership in this aspect of our affairs is attested to by the fact that the whole of the final day Friday, June 23rd is devoted to a session on Medical Economics without the competition of simultaneous sessions in other subjects. To Dr. and Mrs. G. W. Halpenny and to the members of the Quebec Division we tender our thanks in anticipation.

Adopted

7. It was previously reported that a small sub-committee had been appointed to make preliminary preparations for the celebration of our hundredth anniversary in 1967. The first report of this sub-committee, which consists of Dr. Lemieux, Dr. Halpenny and Dr. Kelly, related to the location of the Centenary Meeting and your Executive Committee concurred in the recommendation that the City of Quebec be the chosen place. Concurrently, our historian Dr. H. E. MacDermot was requested to commence the preparation of material for a commemorative volume, One Hundred Years in Canadian Medicine. The Committee on Public Relations has given preliminary consideration to a proposal that the C.M.A. produce a film for public display portraying progress in medicine during the lifetime of our Association. No recommendation on this matter is proposed at this time. In common with other organizations we have been asked to be prepared fittingly to celebrate Centennial Year in Canada and your Executive Committee has authorized that we cooperate with the Canadian Centenary Council in plans as they develop.

Adopted

DIVISIONAL ANNUAL MEETINGS

8. During the calendar year 1960, the Annual Meetings of the Divisions were held as follows:

Quebec Division, Quebec—May 5-7
Ontario Division, Toronto—May 9-13
Newfoundland Division, St. John's—June 2-4

Adopted

9. In each of the above instances, Dr. E. K. Lyon, Canadian Deputy to the President attended to bring the greetings of the C.M.A.; to deliver an address and to take part in all activities of the meeting.

Adopted

10. The tour of duty of Dr. R. MacGregor Parsons commenced very shortly after his installation as President when he visited the Nova Scotia Division at its Annual Meeting at White Point Beach, June 27-29, 1960. Thereafter he attended in turn the following Divisional Annual Meetings as well as representing The Association at a number of functions of bodies related to the health professions.

Prince Edward Island Division, Charlottetown—
August 26-27
New Brunswick Division, St Andrews—August 31-
September 3
Manitoba Division, Winnipeg—September 26-27
Alberta Division, Calgary—September 28-30
British Columbia Division, Vancouver—October
4-7
Saskatchewan Division, Regina—October 18-21

Adopted

11. The presence of the President of The Canadian Medical Association is more than an interesting tradition and an onerous and time-consuming duty, because it provides one more strand in the cohesiveness and the unity of doctors in all parts of the country. We make great demands on our President but in compensation he has the opportunity to see our units at work and at play and in the process gains considerably in his understanding of Canadian medicine and its practitioners.

Adopted

12. The schedule of Divisional Annual Meetings for 1961 is as follows:

Ontario Division, Toronto—May 8-12

Newfoundland Division, St. John's—June 1-3
 Nova Scotia Division, Ingonish—June 12-14
 Quebec Division, Montreal—June 21
 Prince Edward Island Division, Charlottetown—
 August 25-26
 New Brunswick Division, St. Andrews—August
 30—September 2
 Alberta Division, Edmonton—September 25-28
 British Columbia Division, Kamloops—October
 2-6
 Manitoba Division, Winnipeg—October 11-13
 Saskatchewan Division, Saskatoon—October 17-20
Adopted

SENIOR MEMBERS

13. The select company of Senior Members of The Canadian Medical Association has been amplified by the election, on nomination of their respective Divisions, of the following stalwarts of the profession:

British Columbia	Dr. Morley Counsellor Bridgman, Oliver
	Dr. George Herbert Clement, Vancouver
Alberta	Dr. Melvin Graham, Ponoka Dr. Donald Neil MacCharles, Medicine Hat
Saskatchewan	Dr. Walker Stewart Lindsay, Saskatoon
Manitoba	Dr. Donald Faison McIntyre, Winnipeg
Ontario	Dr. Frederick Arnold Clarkson, Toronto Dr. Isaac Edwin Crack, Hamilton Dr. William James Deadman, Toronto Dr. Donald Grant G. Dingwall, Dryden Dr. John Thomas Phair, King Dr. Samuel James Streight, Port Credit
Quebec	Dr. David Sclater Lewis, Montreal Dr. Joseph Romeo Pepin, Montreal Dr. Wilder Graves Penfield, Montreal Dr. Charles Adolphe Bohemier, Montreal
New Brunswick	Dr. Arch Stanley Kirkland, Rothesay
Nova Scotia	Dr. Daniel F. MacInnis, Shubenacadie
Newfoundland	Dr. Chester Harris, Marystown

The General Secretary stated that as Dr. Joseph Roméo Pepin had been unable to accept Senior Membership in The Association, only three names had been presented by Quebec Division.

Subject to the deletion of Dr. Pepin's name, this paragraph was adopted.

14. The honour of Senior Membership will be conferred by the President at the Annual General Meeting to be held on Wednesday, June 21 or at the Annual Meeting of the appropriate Division.

Adopted

HONORARY MEMBER

15. His Excellency Major-General Georges Philias Vanier, Governor General of Canada, has graciously accepted election to Honorary Membership in The Canadian Medical Association. His installation was planned as a feature of the Annual General Meeting but we learn with regret that his duties will take him to the far North at the time of the Annual Meeting.

Adopted

MEMBERSHIP

16. The following table indicates the membership in The Canadian Medical Association at the end of the last two calendar years:

Province	1959	1960
British Columbia.....	1,500	1,632
Alberta.....	1,355	1,501
Saskatchewan.....	920	1,000
Manitoba.....	942	942
Ontario.....	5,861	6,067
Quebec.....	2,066	2,226
New Brunswick.....	457	472
Nova Scotia.....	549	542
Prince Edward Island.....	77	82
Newfoundland.....	125	181
Members-at-Large.....	19	17
Non-Resident Members....	71	84
Military Members.....	36	63

Total: 13,978 14,809

Adopted

17. In the report of the Honorary Treasurer there will be found the record of the financial affairs of The Association for the calendar year 1960. Despite a healthy profit on publishing operations we incurred a deficit on our total operations and we foresee little prospect of decreasing expenditures. A very substantial portion of the revenue of The Association derives from membership fees, which since 1953 have been at the rate of \$20.00 per annum for ordinary membership. By arrangement with the Divisions we have a sliding scale of membership fees for various categories which extends from nil to \$20.00. The actual average C.M.A. membership fee levied in 1960 amounted to \$15.97.

Adopted

18. Your Executive Committee has studied the situation carefully and recognizes that revenues are declining and expenses increasing. No recommendation for an increase in the annual fee is presented at this time but it is quite possible that an adequate increase will be required in the not-too-distant future.

Adopted

AFFILIATIONS

19. No applications for affiliations are presented this year from either category of affiliates, national medical societies or national societies of mixed medical and lay membership. Relations with both classes of existing affiliates have, however, been cordial and intimate. As a consequence of the conference of medico-lay affiliates held in May, 1960, a series of descriptive articles have been appearing in the Journal with a view to acquainting the profession with the operations of these voluntary health agencies which play such an important role in our society.

Adopted

20. Close contact has been maintained with those twenty national medical societies which constitute our medical affiliates and we look forward to their close cooperation in all our studies which relate to the presentations of the profession to the Royal Commission on Health Services.

Adopted

21. At the request of two of our affiliates, the College of General Practice of Canada and the Royal College of Physicians and Surgeons of Canada, the C.M.A. provided a chairman in the person of Dr. E. K. Lyon for a dis-

cussion of the broad aspects of the relationships between general practitioners and specialists. Dr. Lyon reports that the meeting held in November, 1960 was productive of goodwill and increased understanding.

Adopted

In reply to a query from Dr. R. D. Atkinson as to whether the report of the meeting of the College of General Practice and the Royal College of Physicians and Surgeons of Canada had been made available to the C.M.A., the General Secretary replied that the C.M.A. had been asked only to provide the Chairman. Dr. Kirk Lyon was present in this capacity but we have no knowledge that the report has been released, although it is possible that the information had been circulated to the two organizations concerned.

STAFFING

22. In order to place in proper perspective the needs of The Association for staff members, your Executive Committee, on the recommendation of its sub-committee on Organization, decided to employ the services of management consultants to survey the operations of the headquarters of The Canadian Medical Association. The firm of Woods, Gordon and Company conducted such a study during the summer of 1960 and rendered a detailed report on our operations.

Adopted

23. It was with some satisfaction that we received the following general comment:

"In general, we were favourably impressed by the calibre of the personnel comprising the permanent staff of The Association and the way in which The Association's activities are organized and directed. While there are one or two improvements that we believe can be made to the plan of organization of The Association, for the most part the senior members of the staff with whom we talked appeared to have a clear idea of what their duties and responsibilities were, seemed interested in their work and are in our opinion capable of providing a high standard of service to the members and committees of The Association."

Adopted

24. A number of detailed adjustments were suggested in a lengthy report and your Executive Committee has implemented many of them and rejected others for reasons which appeared to us to be compelling. The gap in the staff of the Canadian Medical Association Journal occasioned by the resignation of Dr. Maurice R. Dufresne has been a matter of great concern to your Staffing Committee. Every avenue was pursued for several months to find a suitable bilingual replacement for the post of Associate Editor without success and it was with reluctance that it was concluded that this language qualification had to be abandoned for the time being. A very promising prospect was discovered in the person of Dr. John O. Godden of Halifax and, after negotiation, the appointment was offered to him and accepted. Dr. Godden will report for duty shortly after the close of the academic session at Dalhousie. He brings to his new appointment an extraordinarily good background of medical training, a considerable experience in medical journalism, a keen mind and a crusading spirit which should permit him to serve The Association well.

Adopted

Dr. R. L. DuBerger recommended that efforts be continued to obtain a suitable individual, with the necessary bilingual qualifications, as Associate Editor for the Journal.

25. It was the observation of our management consultants that two areas of our activities would shortly require additional personnel, economics and public relations. Your Executive Committee agreed that the former took precedence and authorized that a search be made for a man trained in statistics and economics to work with Mr. Freamo. As this is being written one desirable candidate has been discovered and the appointment of Mr. Guy C. Clarkson, M.A., has been made.

Adopted

26. It was agreed that additional professional help in public relations should preferably be provided by an outside consultant and a very thorough investigation of nine leading firms was undertaken. The choice eventually fell on Mr. John Doherty of John Doherty and Company of Ottawa who, with the complete concurrence of the Committee on Public Relations as well as that of the Executive Committee commenced his consultant relationship on April 1.

Adopted

27. The female members of the staff of an organization such as this are so essential to its activities that their work is taken for granted and they are the unsung heroines of the entire operation. The Canadian Medical Association has been singularly fortunate in the ladies of the typewriter who have been attracted to its service and never more so than when Miss Marion Zoellner twelve years ago reported for duty with her shiny new university diploma. Miss Zoellner rose through the ranks to the position of chief clerk, an appointment which she has adorned since 1952. Marriage and its consequence has deprived the C.M.A. of the talents of Mrs. Robert Johnston, as she may now be referred to, and your Executive Committee notes her departure with regret, mitigated only by the realization that the important career of motherhood will now claim her full attention.

Adopted

28. We were fortunate that a well-qualified successor was available among the members of the staff, and Mrs. K. Shand, who attends this meeting of the General Council for the first time, has assumed the important appointment of chief clerk.

Adopted

NATIONAL MEETINGS

29. In an endeavour to minimize the effects of time, distance and other handicaps to communication, The Association has sponsored and financed more national meetings of committees, conferences and other gatherings than in any previous year. A list of such meetings include the following:

- Committee on Economics—two meetings.
- Committee on Public Relations—two meetings.
- Committee on Approval of Hospitals for the Training of Junior Interns.
- Committee on Approval of Schools for Laboratory Technologists.
- Committee on Approval of Schools for Radiological Technicians.
- Special Committee on Prepaid Medical Care—three meetings.
- Executive Sub-Committee on Health Services—four meetings.
- The Midwinter Conference of Divisional Secretaries.
- Committee on Maternal Welfare.
- Committee on Rehabilitation.

Committee on the Medical Aspects of Traffic Accidents.

Conference on Physical Fitness, jointly sponsored by the Committee on Public Health and the Canadian Association for Health, Physical Education and Recreation.

Adopted

30. In addition, the Divisional members of national committees have been kept in touch and consulted by correspondence and the chairmen and other members of committees have represented The Association at meetings and conferences of related organizations. In sum, the work of our committees and representatives suggest that our interests are many and that Canadian medicine is taking its part in diverse aspects of our complex society.

Adopted

RECOMPENSE FOR ELECTIVE OFFICERS

31. In an outburst of generosity, the General Council at its last meeting passed a resolution suggesting that the President of The Association and members of the Executive Committee be reimbursed for their efforts by the payment of honoraria. To implement the intent of this resolution a sub-committee was appointed and a study was undertaken of the financial aspects of the Presidency, the financial aspects of the Executive Committee and the question of the recognition of meritorious service. Your Executive Committee has accepted the following recommendations: (a) that the elective officers of The Association be not reimbursed by salary or honoraria but that more adequate expense allowances to officers and members of the Executive Committee be paid; (b) that all expenses incurred by the President in entertaining in his official capacity be a charge on Association funds; (c) that the expenses of Past Presidents incurred in attending the sessions of the General Council be paid by The Association; (d) that the expenses of the President's wife and the wives of the General Secretary and the Deputy General Secretary in accompanying their husbands on Association business be paid; (e) that a lapel pin in the form of the caduceus be designed for presentation to the wives of all Past Presidents.

Adopted

(d) Dr. F. A. Dunsworth referred to the possibility of increased membership fees and requested information as to the necessity for the wife of the General Secretary and the wife of the Deputy General Secretary visiting the various Divisions, with resulting expenses to The Association.

In reply, Dr. E. Kirk Lyon pointed out that at Divisional meetings there is usually a very active program of the Ladies' Committee and the presence of the wives of these two officers contributes a great deal to the success of these programs.

(e) Dr. O. B. Millar questioned the use of the word "caduceus" to describe the staff of Aesculapius which is the central figure in the crest of the C.M.A.

32. Your Executive Committee and the Committee on Awards, Scholarships and Lectures are considering the suggestion that a C.M.A. Gold Medal be established for meritorious service.

Dr. E. Kirk Lyon requested that the discussion re the C.M.A. Gold Medal be postponed until consideration of the Report of the Committee on Awards, Scholarships and Lectures.

Subsequently, this matter was discussed and the terms of reference governing this award will be found in the Report of the said Committee.

MEDICAL ECONOMICS

33. Elsewhere in these reports will be found the Report of the Committee on Economics. It is not our purpose to duplicate the observations of the responsible Committee but to comment on those matters which required the ultimate decision of the Executive Committee. Aid to our colleagues in Saskatchewan has been rendered in a financial way by a grant of \$35,000 of Association funds and by the investment of a great deal of the time of officials of the C.M.A. in the studies proceeding in that province. Fortunately the resources of our members in Saskatchewan have been sufficient to limit the financial aid required of the national Association. The utilization of staff promises to level off with the emergence of the Royal Commission on Health Services as the area demanding primary attention.

Adopted

34. At last year's meeting of this General Council the validity of the answers to three questions in the Questionnaire on Health Insurance was challenged and their disclosure was postponed for further investigation. Your Executive Committee turned over to the Committee on Economics and to the Special Committee on Prepaid Medical Care the task of testing the answers. After consultation with the experts who helped devise the Questionnaire and a thorough discussion of all aspects by the committees concerned it was reported to your Executive Committee that the replies appeared to be as valid as any others and that no reason for their further suppression could be substantiated. Your Executive Committee therefore authorized the release of this information, not in isolation, but in the context of the Questionnaire as a whole.

On the recommendation of Dr. J. F. C. Anderson, it was agreed that the wording

"... and that no reason for their further suppression could be substantiated," be replaced by the following
"... and that no reason for further deferment of their publication could now be justified".

Dr. P. Bruce-Lockhart referred to the exception taken at the last meeting of General Council to the Questionnaire on Health Insurance on the grounds that the three questions involved concerned a medical care plan which might cover anything from a reimbursement type of plan to a full-scale government civil service, and requested information.

Dr. Rabson replied that the three questions referred to were submitted to the experts who had assisted in devising the questionnaire and who were experienced in market research opinions. 10,669 doctors had answered the questions and because of this large response and because no failure to comprehend the purport of the questions was apparent, it was the view of these experts that this reflected the general opinion of the doctors of Canada at this time.

Adopted as amended

35. The formation of the Canadian Conference on Health Care was reported to this General Council last year and the participation of the C.M.A. in this informal organization of national carriers of voluntary health insurance was authorized. The following organizations are represented in the Conference:

All Canada Insurance Federation.
The Canadian Council of Blue Cross Plans.
Canadian Health Insurance Association.
Canadian Hospital Association.

The Canadian Life Insurance Officers Association,
and
The Canadian Medical Association.

Adopted

36. Although urged to align itself, Trans-Canada Medical Plans has not yet seen fit to join the Conference but observers have been present at the sessions. Although the Conference meets infrequently and has no power to commit the member organizations, it does provide a useful medium for the exchange of information among the diverse elements which have a common interest in promoting medical services insurance under voluntary auspices.

*Moved by Dr. S. N. Nathan,
seconded by Dr. O. B. Millar,*

that this Council urges T.C.M.P. to align itself with those bodies which have a common interest in the provision of medical services insurance on a voluntary basis, by becoming a participating member in the Canadian Conference on Health Care.

Carried

37. Our latent interest in the Australian approach to health insurance was stimulated by a suggestion emanating from the British Columbia Division that an on-the-spot study be undertaken to observe the working of the refund system of financing medical insurance and the operation of the multiple carriers of benefits. Our representative to the British Commonwealth Medical Conference, Dr. T. J. Quintin, was chosen with a view to his knowledge of prepaid medical care and he was commissioned to survey the Australian scene for such lessons as might be applied to conditions in Canada. In this latter assignment he was accompanied by Mr. B. E. Freamo, Secretary, Medical Economics and by Dr. E. C. McCoy and Dr. P. J. Banks of the B.C. Division. The composite report of this team of observers was published in the April 29 issue of the Journal and it is recommended reading for all members interested in medical services insurance.

Adopted

38. The major effort of this General Council at its last meeting was the elaboration of the C.M.A. Statement on Medical Services Insurance. The experience of a year in using this policy declaration has demonstrated its essential usefulness as the basis for constructive proposals in the current context. Certain details of the fourteen points which follow our statement of beliefs have been questioned by at least two Divisions and alternative wordings have been proposed. The Statement in its present form has, however, been widely circulated to Members of Parliament, to members of provincial Legislatures by the Divisions concerned and to the press. Your Executive Committee has concluded that it should not exercise the prerogative of this General Council to amend such a carefully prepared Statement and that the version which has been promulgated should stand.

*Moved by Dr. W. W. Wigle,
seconded by Dr. W. D. Whyte,*

that Section 38 be amended by the addition of the words "for the present" following the word "stand" in the last sentence;

And that the Statement on Medical Services Insurance be reviewed in accordance with recommendations as may be received from the Divisions.

Carried

39. Your Executive Committee has been greatly aided in its efforts to implement the Statement on Medical

Services Insurance by the work of the Special Committee on Prepaid Medical Care. The report of that Special Committee is reproduced herewith and the principles enunciated and the recommendations made are endorsed for adoption by this General Council.

Adopted

REPORT OF THE SPECIAL COMMITTEE ON PREPAID MEDICAL CARE

Mr. Chairman and Members of the Executive Committee:

In June, 1959 the General Council of the C.M.A. requested the Executive Committee to set up a "Special Committee on Prepaid Medical Care" with the following terms of reference:

- (a) to study and make available to the C.M.A. facts, data and recommendations with respect to timely and proper provision of prepaid medical care for the people of Canada;
- (b) to investigate matters pertaining to the economic and social aspects of prepaid medical care;
- (c) to study and resolve matters of health insurance of common interest to the C.M.A. and prepaid plans in Canada, in order that each may assist the other to provide the best possible medical service to the people of Canada;
- (d) to utilize the functions and personnel of the Bureau of Medical Economics; to hold meetings as frequently as necessary for the proper completion of its terms of reference and to maintain a close liaison with the Economics Committee and the Executive Committee of the C.M.A.

40. During the first year under the Chairmanship of Dr. J. A. McMillan the Committee attempted through a questionnaire to determine, among other things, the attitude of the profession towards existing prepayment plans. Dr. McMillan reported to the General Council at Banff, June, 1960.

41. During the past year your Committee has endeavoured to outline the role of prepaid plans in implementing the C.M.A.'s Statement on Medical Services Insurance.

42. In our deliberations we were also aware of the request to the C.M.A. from the T.C.M.P. Commission for guidance as to methods by which the doctor-sponsored plans could assist in attaining these objectives.

43. This suggested to the Committee the necessity for a study of ways and means by which our existing doctor-sponsored plans can be utilized to obtain maximum coverage within the framework of the Statement of Policy.

PRACTICAL COVERAGE BY OUR PREPAID PLANS

44. The first area studied was coverage now provided by each of the Divisionally sponsored prepaid medical care plans in order to determine whether existing coverages were sufficiently broad to fulfill the objectives outlined in the Statement of Policy.

45. The Committee considered that the great majority of existing prepaid plans were not sufficiently comprehensive in scope. All the plans have restrictions, for example, only one allowed periodic health examination.

46. The Committee agreed that all plans should be in a position to extend coverage so that such coverage would be truly comprehensive.

47. In the opinion of the Committee the following comprehensive service plan should be made available on a fixed fee basis to the vast majority of the population.

1. Complete in and out of hospital medical care, when performed by qualified physicians;
2. Except when covered by a public agency, out of hospital laboratory services, diagnostic and therapeutic radiology, when ordered by a physician and performed by or under the direction of a physician;
3. Immunization by qualified physicians;
4. Periodic health examinations by qualified physicians, which are not instituted at the request of a third party;
5. Well baby care by qualified physicians;
6. Refractions by qualified physicians.

In addition the Committee decided that certain exclusions were necessary.

1. Those services which are now provided and required to be given by a public authority.
 2. Treatment of conditions which are not medically necessary, physically or mentally, e.g. plastic surgery for purely cosmetic purposes.
 3. Physiotherapy except for the medical component.
- The Committee agreed that treatment of alcoholism and drug addiction should not be exclusions from plan contracts.

48. We recognize that those plans which now provide only limited coverage may only be able to institute comprehensive coverage as defined above in regulated stages over a period of time.

49. It is likely that the above objectives would require an increase in present premiums but in the opinion of the Committee such a positive course of action is necessary on the part of organized medicine.

50. In relation to medical coverage the Committee considered whether it should outline in detail the framework of what constitutes good medical care. It was felt, however, that the prepayment mechanism does not, and should not, affect the high quality of medical care now being provided by the doctors of Canada.

EXTENDED HEALTH BENEFITS

51. As a supplement to this comprehensive coverage the Committee considers that all plans should make available under their own auspices extended health benefit contracts.

52. In addition to comprehensive coverage the Committee recommends that our prepaid plans should be in a position to offer more than one type of coverage to the public. It was, however, agreed that the outlined comprehensive service plan is the only plan which meets the needs of low income groups and particularly those income groups which require some measure of assistance in the payment of their premiums.

53. The Committee recommends that all doctor-sponsored prepaid plans should be in a position to offer rate guarantees for lengthy periods of time. One way to achieve this would be for the C.M.A. to suggest to its Divisions that they should attempt to standardize the times at which schedules of fees will be reviewed. This rate guarantee should not be such as to obviate the mechanism of experience rating where such exists.

54. The Committee recommends that each Division recognize its responsibility to the subscribers and doctors in assisting the plans in methods of control of services where such do not exist. Close liaison between the plan and the profession is essential both at the policy and administrative levels. Active committees of the Divisions can greatly assist their plan in studying variations in patterns

of practice and arbitration of disputes between doctor and plan including the mediation of accounts. The education of the profession and the public regarding prepayment principles might well be the responsibility of one committee.

55. The Committee considered whether it was practical to suggest a method of accreditation by C.M.A. of all medical insurance coverages. It was agreed in principle that such accreditation would be of great value but the Committee felt that the practical difficulties of implementation were too great and numerous to recommend the institution of accreditation at this time.

56. The Committee studied whether reimbursement methods of payment should be introduced by the doctor-sponsored plans. It was apparent that there is a considerable lack of knowledge and experience with reimbursement methods in Canada, suggesting the impracticability of recommending such methods at this time. The Committee feels, however, that further study should be given to this method of medical insurance to determine its applicability to the practice of medicine in Canada.

ENROLMENT

57. The Committee has studied the enrolment policies of our doctor-sponsored prepaid plans. The C.M.A.'s Statement of Policy envisaged that prepaid medical services insurance would be made available to all Canadians.

58. Although some plans now provide individual enrolment the Committee recommends that in order to fulfill the C.M.A. Statement of June, 1960 all doctor-sponsored prepaid medical plans should undertake urgent consideration and early implementation of methods of individual enrolment for all, including those with pre-existing medical conditions under two main categories.

- (a) Those under the age of 65.
- (b) Those 65 years of age and over.

The Committee recognizes that in order to do this it will be necessary to charge premiums which might be higher than our present group premiums and the institution of waiting periods may be necessary.

Dr. Glenn Sawyer questioned whether there was any value in separating individuals into age groups and suggested that it be left to the various plans across Canada to work out a satisfactory method to enrol people on an individual basis. Following discussion,

*Moved by Dr. Sawyer,
seconded by Dr. Nathan,*

that the words "under two main categories. (a) Those under the age of 65. (b) Those 65 years of age and over" be deleted.

Carried

59. The Committee, therefore, suggests the removal of all barriers to individual enrolment such as restrictions due to age, pre-existing medical conditions and eligibility for group insurance.

60. The Committee believes that in the implementation of our beliefs a combination of subsidies by the profession, the Government and other agencies may be necessary. We recommend that The Canadian Medical Association indicate publicly the willingness of the profession to continue the principle of service subsidy by the profession in areas where such subsidies are indicated.

Dr. F. A. Dunsworth took exception to the word "subsidy" in this para-section, as he felt it had a connotation linking it with government.

Moved by Dr. N. K. MacLennan,
seconded by Dr. H. E. Christie,

that section 60 be changed to read—"It is the opinion of the committee that, in the implementation of our beliefs, a cooperative effort by the profession, the government and other agencies will be necessary for the payment of these services. We recommend that the C.M.A. indicate publicly the willingness of the profession to continue the principle of accepting reduced fees for certain sections of the population where such may be indicated."

Carried

61. In order to enable plans to offer the greatest possible coverage it should be recognized that while most of the population will be able to pay the required premiums from their own resources, certain persons will require financial assistance from Government or other agencies.

1. Persons of all ages of low income who have limited capital resources will require assistance in varying proportions of the required premiums.
2. Because of the high rate of utilization, the premiums of persons aged 65 and over require subsidy in order to keep these premiums at the level applicable to the general working population.

Moved by Dr. G. Sawyer,
seconded by Dr. S. N. Nathan,

that sub-section 2 be changed to read as follows:
"2. Because of the high rate of utilization, the premiums of certain citizens may require subsidy in order to keep these premiums at the levels applicable to the general working population."

Carried

62. We recommend that the C.M.A. should suggest to each Division the undertaking and the implementation of these recommendations.

63. The above deliberations were held at three, two-day meetings of the Committee in December, 1960 and in January and March of 1961. In addition to members of

the Committee the entire secretariat of the C.M.A., Doctors Kelly, Peart, Mr. Cross and Mr. Freamo who acted as secretary, gave us the benefit of their experience and advice. For this on behalf of the members of the Committee I wish to express our grateful appreciation. In addition, Mr. Howard Shillington, Executive Director of T.C.M.P. gave us his unlimited assistance and for this cooperation we are also very grateful. In addition, Dr. J. A. McMillan, Chairman of the Committee on Economics was present at all our meetings and his vast experience and knowledge of prepayment in Canada was of inestimable value to us.

64. The members of the Committee deserve the Chairman's highest praise for their intense interest and their careful analysis of all the matters which were perused.

All of which is respectfully submitted.

L. R. RABSON,
Chairman.

Personnel of the Special Committee:

- Dr. L. R. Rabson, Winnipeg (Chairman).
Dr. G. E. Wodehouse, Toronto.
Dr. T. J. Quintin, Sherbrooke.
Dr. D. F. McPherson, Lethbridge.
Dr. R. M. Anderson, Toronto.

The Report of the Special Committee on Prepaid Medical Care, as amended, was adopted.

65. The conclusion of an agreement between the Government of Quebec and the Government of Canada under the Hospital Insurance and Diagnostic Services Act now provides for the citizens of all provinces and two territories the basic hospital insurance which is such an important element in our health services. Instituted in Quebec on January 1, 1961, the hospital insurance plan shows signs of hasty organization and many of the issues which have been familiar in other provinces remain unsettled. The essential cooperation of our colleagues in Quebec is, however, being brought to bear on the problems as they emerge and it is predictable that solutions will be found to make this plan operate to the

COMPREHENSIVE MEDICAL CARE COVERAGE

APPENDIX

Benefits as recommended by Committee		Benefits as provided by member plans of T.C.M.P.									
Complete in and out of hospital care when performed by qualified physicians. (except as outlined below)	Plan 1	2	3	4	5	6	7	8	9	10	11
	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Limited	Yes	Yes
Out of hospital diagnostic X-ray	Yes	Yes	\$50 limit per yr.	\$35 limit per yr.	\$35 limit per yr.	Yes	\$50 limit per yr.	Yes	\$25 limit per yr.	\$25 limit per yr.	\$25 limit per yr.
Deep X-ray	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	\$25 limit	\$25 limit
Out of hospital laboratory services	Yes	Yes	\$50 limit per yr.	Yes	Yes	Yes	Yes	Yes	\$15 limit per yr.	\$25 limit per yr.	Yes
Immunization	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Periodic Health Exam.	No	No	No	No	No	No	No	Yes	No	No	No
Well baby care	No	No	No	No	No	Yes	Yes	Yes	No	No	No
Refractions	No	No	No	No	No	Yes	Yes	Yes	No	No	Yes
Psychiatric Treatment	Limited	Limited	Limited	No	No	Limited	Limited	Limited	Limited	30 days in hsp. only	Limited

general satisfaction of the public, the hospitals and the profession. *Adopted*

INTERNATIONAL MEDICINE

(a) Aid from Canada.

66. Reference has been made in previous reports to C.M.A. cooperation with the Canadian Red Cross Society in relation to international efforts to mitigate the effects of disaster and pestilence. Through the agency of the International League of Red Cross and Red Crescent Societies very effective aid has been mobilized by Dr. W. Stuart Stanbury, National Commissioner of the Canadian Red Cross Society and this Association shares the pride of that organization in the effort of Canadian doctors. During the period under review the following have served in the areas mentioned:

Morocco

Dr. Bertrand Primeau, Ottawa
Dr. Joseph Berkley, Windsor
Dr. Charles M. Godfrey, Toronto
Dr. Gustave Gingras, Montreal.

Congo

Dr. Raymond Allard, Montreal
Dr. Edmund V. Currie, Montreal
Dr. John A. Davidson, Ormstown, P.Q.
Dr. Phil Edwards, Montreal
Dr. Roger Paulin, Montreal
Dr. Jonathan C. Sinclair, Toronto
Dr. Robert Timmons, Montreal
Dr. Richard T. Wilson, Montreal
Dr. G. E. Stoker, Toronto
Dr. Amir H. Khazei, Winnipeg
Dr. Latif G. Sarkiss, Montreal
Dr. Frank L. Lawson, Cobourg, Ont.

Accepted for information

67. The Canadian Red Cross Society has conferred Honorary Membership on four of the group for outstandingly meritorious service. They are Dr. Max H. L. Desmarais of Winnipeg, Dr. Bertrand Primeau of Ottawa and Dr. Charles M. Godfrey and Dr. Jonathan C. Sinclair of Toronto.

Accepted for information

(b) World Medical Association.

68. Our delegates to the XIV General Assembly of W.M.A. held in Berlin in September, 1960 were Dr. N. H. Gosse and Dr. M. A. R. Young. These experienced representatives report that the Committee on Reorganization, appointed a year ago to recommend measures to improve the usefulness of the organization, did not file the results of a completed study but made an interim report for the information of the Council. The appointment of Dr. Heinz Lord to succeed Dr. Louis Bauer as Secretary General was regarded with considerable satisfaction but his untimely death at the age of forty-three has produced a hiatus in the all-important staff position in W.M.A. Efforts are proceeding to fill the vacancy and it has just been announced that Dr. Harry S. Gear of South Africa has been appointed Secretary General.

Accepted for information

69. The XV Assembly will be held in Rio de Janeiro in September, 1961 and the C.M.A. will be represented by Dr. M. A. R. Young and Dr. A. F. VanWart. Continuity in representation and close relationship to the Executive Committee is considered to be desirable and your Executive Committee proposes that at future

meetings one member of the Secretariat accompany our senior delegate who may vary from year to year.

Adopted

(c) British Commonwealth Medical Conference.

70. The sixth meeting of the B.C.M.C. was held in Auckland, N.Z. in February, 1961. Dr. T. J. Quintin was the representative of the C.M.A. and he was supported by Dr. E. C. McCoy who attended as observer, both at the Conference and the B.M.A. Annual Meeting which followed. Following the custom of previous Conferences, the representatives of the participating Commonwealth medical associations were made aware of the highlights of medical services in the host country. In this case a review of medical care in New Zealand was a useful prelude to a more intensive study of medical services insurance in Australia. The major outcome of a discussion of organizational affairs was the majority view that a Commonwealth Medical Association should be formed to replace the B.C.M.C. and your Executive Committee is considering an invitation for the C.M.A. to become a founding member of the proposed new organization.

Adopted

71. After a thorough study of the question and its possible effect on our other international relations through W.M.A., it has been concluded that the current informal organization of the B.C.M.C. is more suitable and the B.M.A. has been advised that we do not desire to promote a Commonwealth Medical Association.

Adopted

(d) Medical Relationships with the U.S.S.R.

72. Your Executive Committee has been impressed with the increase in travel by Canadian doctors to the Soviet Union and with a view to assisting the medical contacts which they desire, negotiations with the Soviet Ambassador to Canada, with the President of the Soviet Academy of Medical Sciences and with the Department of External Affairs have been conducted. No major obstacles have been encountered and when certain details of travel have been cleared with In-tourist it is hoped that a helpful announcement will follow.

Accepted for information

RELATIONS WITH GOVERNMENTS

(a) The Royal Commission on Health Services.

73. In the Report of the Committee on Economics will be found an outline of events leading up to the decision of your Executive Committee to request the appointment of a Royal Commission on Health Services. The significance of such a step will be appreciated by every member of this General Council and in taking it your Executive Committee was deeply conscious of its responsibilities. We are convinced by subsequent events and by the reaction of the profession and the public that our endeavour to initiate an official study of health services in Canada was not only timely but wise.

Adopted

74. Your Executive Committee is aware that, having started a chain of events, it is incumbent on the medical profession to contribute its best efforts to the study and to pursue to its conclusion the work of the Royal Commission on Health Services. To originate the data and submissions which will be required from the national viewpoint we have established an Executive Sub-Committee on Health Services consisting of Dr. G. E. Wodehouse (Chairman), Dr. J. A. McMillan and Dr. L. R. Rabson with the President and the Chairman of the General Council as *ex officio* members. Dr. Andre Leduc has been appointed by l'Association des Medecins de

Langue Francaise du Canada as a member of this Sub-Committee in order that plans as they mature will carry the endorsement of our sister national Association. The preparation of material under the direction of this Executive Sub-Committee has been designated as the task of top priority in the work of the officials and staff of The Association. The Executive Sub-Committee including its *ex-officio* members and the General Secretary have been designated as spokesmen for the presentation of national submissions.

Adopted

75. It is clear to all concerned that the role of the Divisions in relation to the studies of the Royal Commission on Health Services is of paramount importance. It is our hope that each of the Divisions will undertake to assemble data and opinion based on their knowledge of the variety of regional health problems which are evident in a country as big as this one and that though we may speak with many voices the underlying theme will be the same. Your Executive Committee and its Sub-Committee is guided by the successive statements of policy of The Canadian Medical Association and, within the broad framework which these statements provide, it is our intention to coordinate and aid the presentations of the Divisions at their request. We are conscious of the need of effective two-way communication and for our part we will undertake to circulate all material prepared nationally.

Adopted

76. The contribution which our twenty national Affiliated Medical Societies may make to the investigation of the Royal Commission is recognized and we have been in touch with each of them to solicit their help and their expert knowledge. The essential unity of the profession in Canada is an asset which we cherish and which we must all preserve. Our diversities must not be permitted to confuse or impair our attitude and our declarations on matters of basic importance and our experience to date suggests that this is not likely to occur.

Adopted

Dr. H. D. Dalgleish, on behalf of the Saskatchewan Division, expressed thanks to the General Council for financial assistance given in the past year and for the valuable service rendered by the C.M.A. secretariat in (a) preparing the brief for submission to the Advisory Committee, and (b) its presentation. It was felt that the brief was well within the policy of the C.M.A. as laid down last year.

The next two months will be very important in the affairs of the profession in Saskatchewan and might establish a pattern for the other provinces. Dr. Dalgleish suggested that the General Council might wish to go on record that as a profession we do not believe that any pressure, political or otherwise, should be placed on the Advisory Committee who have the responsibility of studying the health needs of any section of the people of Canada.

The General Secretary stated that this matter had been fully discussed at the meeting of the Executive Committee held June 16-17, 1961, and the following statement was proposed:

"The Canadian Medical Association wishes to express its concern that political pressures in the Province of Saskatchewan may be exerted on the Advisory Committee on Medical Care of that province to hasten its recommendations concerning medical services insurance before the studies and deliberations of the Committee have been brought to an orderly conclusion. "It is the opinion of The Canadian Medical Association that medical services insurance can only be considered properly in its relationship to all other aspects of health services. It is also our opinion that it might not be to the best interests of either the citizens

of Saskatchewan or to the citizens of the remainder of Canada if a pattern of Governmental medical services insurance should be established prematurely in that province."

This was approved and it was agreed that this statement should become a resolution of this General Council.

77. As this report is being written we await with interest if not with impatience the further announcement of the Terms of Reference of the Royal Commission on Health Services and the personnel of this important body. The appointment of Chief Justice Emmett M. Hall of Saskatchewan as Chairman appears to be eminently suitable and we look forward to welcoming him as a speaker on the Economics Day program at this Annual Meeting. Relationships with the Minister of National Health and Welfare and the officials of his Department continue to be intimate and, we trust, mutually helpful as many aspects of the studies of the Royal Commission are discussed.

Adopted

78. In the meantime, the Executive Sub-Committee on Health Services is busy in preparing draft submissions and factual data on matters which we believe will aid the Royal Commission whatever its detailed Terms of Reference may be.

79. We face a period of intense and sustained activity in relation to the work of the Royal Commission but the importance of the studies which it will undertake command the best efforts of us all. Our fellow citizens deserve the most searching examination of current and future health services and the medical profession must be prepared to contribute its knowledge and experience.

Adopted

Subsequently, the General Secretary stated that an Order in Council establishing a Royal Commission on Health Care had been announced, indicating the personnel of the Commission and its terms of reference, as follows:

The Committee of the Privy Council have had before them a report from the Right Honourable John G. Diefenbaker submitting that, while recognizing that the power to make laws relating to health services is, except in limited fields, within the jurisdiction of Provincial Legislatures, it is considered to be in the public interest to have a comprehensive and independent study made of the needs of the Canadian people for health services and the resources available to meet such needs with a view to recommending methods of ensuring that the best possible health care is available to all Canadians.

The Committee, therefore, on the recommendation of the Prime Minister, advise that:

Chief Justice E. M. Hall, Saskatoon (Chairman)

Mr. M. Wallace McCutcheon, Toronto, Ont.

Prof. O. J. Firestone, Ottawa, Ont.

Dr. C. L. Strachan, London, Ont.

Dr. Arthur F. VanWart, Fredericton, N.B.

Dr. David M. Baltzan, Saskatoon, Sask.

Miss Alice Girard, Montreal

be appointed Commissioners under Part I of the Inquiries Act to inquire into and report upon the existing facilities and the future need for health services for the people of Canada and the resources to provide such services, and to recommend such measures, consistent with the constitutional division of legislative powers in Canada, as the Commissioners believe will ensure that the best possible health care is available to all Canadians and, in particular, without restricting the generality of the foregoing, the said Commissioners shall inquire into and report upon:

- (a) The existing facilities and methods for providing personal health services including prevention, diagnosis, treatment and rehabilitation.

- (b) *Methods of improving such existing health services.*
- (c) *The correlation of any new or improved program with existing services with a view to providing improved health services.*
- (d) *The present and future requirements of personnel to provide health services.*
- (e) *Methods of providing adequate personnel with the best possible training and qualifications for such services.*
- (f) *The present physical facilities and the future requirements for the provision of adequate health services.*
- (g) *The estimated cost of health services now being rendered to Canadians, with projected costs of any changes that may be recommended for the extension of existing programs or for any new programs suggested.*
- (h) *The methods of financing health care services as presently sponsored by management, labour, professional associations, insurance companies or in any other manner.*
- (i) *The methods of financing any new extended programs which may be recommended.*
- (j) *The relationship of existing and any recommended health care programs with medical research and the means of encouraging a high rate of scientific development in the field of medicine in Canada.*
- (k) *The feasibility and desirability of priorities in the development of health care services.*
- (l) *Such other matters as the Commissioners deem appropriate for the improvement of health services to all Canadians.*

Dr. Arthur F. VanWart, a former President of the C.M.A., who had been appointed to the Royal Commission on Health Care, spoke to General Council, stating that he had been interested in organized medicine for forty years, and that as a member of the Commission he was prepared to do his utmost to see that the people of Canada receive the best possible medical care.

In introducing to the meeting Dr. David M. Baltzan of Saskatoon, who had been named a member of the Royal Commission on Health Services, the General Secretary pointed out that Dr. Baltzan is a leading physician of his city and province, a Fellow of the Royal College of Physicians and Surgeons of Canada, and practised during his whole professional lifetime in the Province of Saskatchewan. He is a former President of the Saskatchewan Medical Association and the author of many articles on the medical sciences.

In reply, Dr. Baltzan stated that it was his firm belief that the formation of the Royal Commission on Health Services is the first forward step for creating action in this field, and that the decision of the Government of Canada to obtain all factual information meets a long-felt need; that having publicly advocated these measures as far back as 1936, it was for him a very fine silver jubilee and a stimulus to carry on in a more concrete form. He welcomed the opportunity to serve on the Royal Commission and felt a very deep sense of responsibility for his share in the task before it.

Moved by Dr. G. E. Wodehouse,
seconded by Dr. R. O. Jones,

that the present Executive Sub-Committee on Health Services be designated now as "The Executive Sub-Committee on Health Care". Carried

Subsequently, it was learned from Chief Justice Emmett M. Hall that the correct designation was "The Royal Commission on Health Services". Accordingly, the Sub-Committee will revert to its former title of Executive Sub-Committee on Health Services.

(b) Indian Affairs.

80. It was reported to this General Council last year that a brief on the medical problems associated with the health services to Indians and Eskimos was being prepared for submission to a Joint Parliamentary Committee on Indian Affairs. This submission which sought clarification of the area of Government responsibility for the health services to Indians, was filed many months ago and it was presented and supported by oral testimony by the Chairman of the General Council and the Deputy General Secretary on March 16, 1961. The views put forward by the C.M.A. were actively debated by the members of the Joint Parliamentary Committee and our representatives are hopeful that the final report may recommend changes in the Indian Act which will improve the relationship of practising physicians to the Indian and Northern Health Services. Adopted

To a query from Dr. M. L. Mador, the General Secretary stated that the Joint Parliamentary Committee had not yet filed its final report. It was hoped that substantial improvement will be instituted.

81. Incidental to our study of the shortcomings of the health services to Indians it was evident that some of the difficulties were due to a division of responsibility for the administration of Indian Affairs between the Department of Citizenship and Immigration and the Department of National Health and Welfare. The appointment of the Royal Commission on Government Organization provided the opportunity to present our views on this organizational matter and a written submission recommending the consolidation of all aspects of Indian Affairs within the Department of National Health and Welfare has been filed. Adopted

(c) Refresher Courses.

82. Acting on the instruction of this General Council to achieve, if possible, the deductibility of expenses of attendance at refresher courses, the Committee on Income Tax made this project its major effort for the current year. The services of a well-known fiscal consultant were retained in the preparation of a new approach to this old problem and a delegation from the Committee on Income Tax interviewed the Minister of Finance on January 27, 1961 to present arguments for the necessary amendments to the Income Tax Act. We are hopeful that the Budget address may provide some encouragement for the belief that our representations were fruitful. Adopted

(d) The Saskatchewan Situation.

83. Although it is technically inaccurate to classify our relationship with the Advisory Planning Committee on Medical Care in Saskatchewan as a contact with government, the nature of that Committee is sufficiently close as to make it possible to regard it as an arm of government. Ever since the last Annual Meeting the efforts of our colleagues in Saskatchewan have been directed towards preparing their submission to the Advisory Committee and in this they have received every aid which the officials of The Association could provide. A great deal of time and effort has been directed towards making constructive Proposals and the work of the Council of the College of Physicians and Surgeons, the Steering and Drafting Committees and the Sections of the College has been outstanding. The oral presentation of the brief took place at the first public hearing of the Committee in Regina on January 12 and 13 and Dr. H. D. Dalgleish, President of the Division and Dr. E. R. Stewardson very ably put forward the views of the profession. They were supported by all members of the secretarial staff of the C.M.A. A

feature of the profession's submission was the evidence presented by the Sections and the cumulative effect was very impressive.

Adopted

84. The Advisory Committee has heard presentations from over forty organizations and individuals, the members of the Committee have undertaken visits to various parts of the world to conduct brief on-the-spot studies of health services. The College of Physicians and Surgeons has been invited to take part in a supplementary session on the National Health Service as well as to present supplementary evidence in the light of other submissions to the Committee. What the outcome of the studies of the Advisory Planning Committee will be is impossible to predict but the profession can derive some satisfaction from the fact that its proposals were put forward firmly and with all evidence of good faith. The experience in Saskatchewan may prove very helpful in our relationship to the Royal Commission on Health Services.

Adopted

(e) Foreign Living Allowances.

85. It was called to our attention that the recommendations of an Inter-departmental Committee studying terms of service and remuneration of Canadians working abroad in government service might have the most serious consequences on the foreign living allowances of the fifty-odd Canadian doctors in Europe in the Immigration and Sick Mariners Medical Service. It was apparent that the Committee's intent was to improve the living allowance of the junior grades of employees but it was proposed that this be accomplished at the expense of more senior grades including the doctors concerned. This appeared manifestly unfair and likely to be destructive of morale in an essential element of the Civil Service. Accordingly, the most urgent representations have been made to the Minister of National Health and Welfare and to the Minister of Finance to prevent the application of this retrogressive proposal to our colleagues serving abroad.

Adopted

Dr. G. D. W. Cameron, Deputy Minister of Health, reported that the representations on behalf of the doctors involved had been heard and the decision of the Treasury Board to introduce the plan to which exception had been taken was deferred until further discussion of the matter. The Minister of National Health and Welfare was of the opinion that the doctor serving overseas would suffer no loss in his gross pay as the result of the introduction of the new regulations, but should this occur the doctor would automatically receive a special allowance to maintain his pay at the same rate.

(f) Newfoundland Crisis.

86. An edict by the Government of Newfoundland to the effect that all Civil Servants in that province must subscribe to an oath of loyalty to the Crown and to an oath of secrecy not to publish or otherwise reveal information acquired in the course of their duties, has caused distress and uncertainty among the fifty-odd doctors employed in the Cottage Hospital Service. These physicians have considered themselves to be contracting parties with the Department of Health to perform specified duties in the Cottage Hospital Service but the effect of this directive has been to classify them as Civil Servants and they have been coerced to take the oaths on fear of dismissal. The usual privileges associated with the Civil Service do not apply to these doctors and it is their view that the required oaths may interfere and conflict with their professional obligations. The protest of the Newfoundland Division on behalf of these members has disclosed a complicated legal situation in which the statutory authority for the Cottage Hospital Service is in some doubt. Conflicting

opinions of lawyers has featured the discussion and recourse to the courts has been considered. The determined attitude of government to apply this requirement to the doctors serving in the Cottage Hospital Service suggests that, if defeated in court, the Legislature might settle the question by passing a new law to confirm the situation. Although we have not been effective in extricating our Newfoundland colleagues from the morass in which they find themselves, their experience points up certain lessons which we should heed. Partnership and cooperation with governments have been our watchword in many aspects of health services, but this relationship is a precarious one when one of the partners holds all the power. Despite our generally favourable experience in working with governments, we should remember that unilateral policy decisions are possible, that the paymaster is in effective control and that the rules of the game may be changed while play proceeds.

Adopted

Dr. J. B. Roberts explained that the doctors employed under the Cottage Hospitals Service were not objecting to the oath of loyalty but to the oath of secrecy, which it was felt brought them under the classification of civil servants. Newfoundland Division was now contemplating taking the matter to the Supreme Court for a definite ruling.

In reply to a question by Dr. J. H. Gibson as to what action had been taken by the Executive Committee in this regard, the General Secretary reported that at its last meeting the Committee had recommended that sympathetic consideration be given to any request from Newfoundland Division for assistance, should they decide to proceed with the presentation to the Courts.

Following discussion, it was

*Moved by Dr. H. Wigmore,
seconded by Dr. C. B. Stewart,*

Resolved that this Association shall do all within our power, by democratic means, to oppose an arbitrary act of government which classifies the medical profession, in whole or in part, as civil servants.

Carried

At the meeting of the Executive Committee held June 22, 1961, the foregoing resolution was amended to read:

"that this Association shall do all within its power, by democratic means, to oppose any arbitrary act of government which imposes classification as civil servants on the medical profession in whole or in part against their will."

(g) Restrictive Trade Practices Inquiry.

87. The Association has received an invitation from the Chairman of the Restrictive Trade Practices Commission to consider whether it desires to submit a brief to an inquiry in connection with the manufacture, distribution and sale of drugs. A perusal of the voluminous material collected by the Director of Investigation and Research under the Combines Investigation Act was undertaken by the Chairman of the Committee on Pharmacy and by the General Secretary. The Chairman of the Commission was consulted to determine whether the inquiry was confined to the economic aspects of the distribution of ethical drugs and in reply he stated "the Commission's inquiry into the subject of drugs is concerned with restrictive practices and monopolistic situations and their economic effects." Your Executive Committee carefully considered whether The Association could contribute helpful views under these conditions and concluded that we had little to offer in the present instance. It was, therefore, decided not to file a submission.

CONCLUSION

88. In this report we have touched upon many of the activities of our Association. Some of them concern the prosaic day-to-day duties which our membership expects us to handle without fanfare and some of them have momentous consequences. Both kinds of business are essential in the operation of a large, representative, voluntary national medical association and in the discharge of our obligations to this General Council we have endeavoured to interpret your will and to make such decisions as are called for. In this task we have been greatly aided by the Committee of The Association, by the support of the Divisions and by the talents which officials and staff bring to their duties.

All of which is respectfully submitted.

MURRAY S. DOUGLAS,
Chairman.

Personnel of the Committee:

Officers:

President—Dr. R. MacGregor Parsons, Red Deer
President-Elect—Dr. G. W. Halpenny, Montreal
Past President—H.R.H. The Duke of Edinburgh
Deputy to the Past President—Dr. E. Kirk Lyon, Leamington
Chairman of the General Council and the Executive Committee—Dr. Murray S. Douglas, Windsor
Honorary Treasurer—Dr. G. E. Wodehouse, Toronto

Divisional Representatives:

Dr. Peter O. Lehmann, Vancouver
Dr. A. A. Haig, Lethbridge
Dr. E. R. Stewardson, Moose Jaw
Dr. R. W. Richardson, Winnipeg
Dr. W. W. Wigle, Dryden
Dr. R. H. McCreary, Arnprior
Dr. W. W. Baldwin, Brooklin
Dr. Renaud Lemieux, Quebec
Dr. T. J. Quintin, Sherbrooke
Dr. H. Paul Melanson, Moncton
Dr. R. O. Jones, Halifax
Dr. J. A. McMillan, Charlottetown
Dr. J. B. Roberts, St. John's

Officials:

General Secretary—Dr. A. D. Kelly
Deputy General Secretary—Dr. A. F. W. Peart
Secretary, Medical Economics—Mr. B. E. Freamo
Secretary, Public Relations—Mr. K. C. Cross
Managing Editor—Dr. T. C. Routley
Editor, C.M.A. Publications—Dr. Donald C. Graham
Associate Editor—Dr. G. T. Dickinson

Moved by Dr. G. Sawyer,
seconded by Dr. R. M. Parsons,

that the Report of the Executive Committee, as amended, be adopted, with the exception of Section 32, which will be considered when the Report of the Committee on Awards, Scholarships and Lectures is presented.

Carried

In the course of the presentation of the Report of the Committee on Awards, Scholarships and Lectures, the terms of reference governing the award of the C.M.A. Medal of Service were considered and approved by General Council.

Accordingly, it was

Moved by Dr. E. K. Lyon,
seconded by Dr. H. V. Morgan,

that the Report of the Executive Committee as amended, including Section 32, be adopted.

Carried

NOMINATIONS AND ELECTIONS

The General Secretary read the By-law governing the election of the Nominating Committee and reported that he had received the following nominations from the Divisions to act on the Nominating Committee:

British Columbia—Dr. F. S. Hobbs, Vancouver
Alberta—Dr. A. A. Haig, Lethbridge
Saskatchewan—Dr. H. D. Dalglish, Saskatoon
Manitoba—Dr. H. L. McNicol, Flin Flon
Ontario—Dr. W. W. Wigle, Dryden
Quebec—Dr. R. Lemieux, Quebec
New Brunswick—Dr. T. S. Dougan, Sussex
Nova Scotia—Dr. F. J. Granville, Stellarton
Prince Edward Island—Dr. C. A. Coady, Charlottetown
Newfoundland—Dr. J. B. Roberts, St. John's

Dr. N. H. Gosse, Acting Chairman, declared that by virtue of the By-law these members nominated, being present, are elected to the Nominating Committee.

The Nominating Committee met at 5.15 p.m. in the Peribonca Room of the Queen Elizabeth Hotel, Montreal, P.Q. The President presided and all members of the Committee were present. The duties of the Committee as outlined in the By-law, Chapter XI, Section 3, were read and carried out.

The Nominating Committee recommends to the General Council the election of the following officers:

For the office of President-Elect—
Dr. M. R. MacCharles, Winnipeg, Manitoba
For the office of Chairman of the General Council—
Dr. T. J. Quintin, Sherbrooke, P.Q.
For the office of Honorary Treasurer—Dr. G. E. Wodehouse, Toronto, Ontario

and the election of the following members of the Executive Committee and their alternates, all of whom have been proposed by their respective Divisions:

British Columbia—Dr. F. S. Hobbs, Vancouver
Alternate—Dr. H. N. Watson, South Burnaby
Alberta—Dr. E. F. Donald, Edmonton
Alternate—Dr. R. K. C. Thomson, Edmonton
Saskatchewan—Dr. H. D. Dalglish, Saskatoon
Alternate—Dr. J. F. C. Anderson, Saskatoon
Manitoba—Dr. R. W. Richardson, Winnipeg
Alternate—Dr. F. G. Allison, Winnipeg
Ontario—Dr. R. H. McCreary, Arnprior
Dr. W. W. Wigle, Dryden
Dr. P. Bruce-Lockhart, Sudbury
Alternate—Dr. R. D. Atkinson, Waterloo
Quebec—Dr. Thomas Primrose, Montreal
Dr. René L. DuBerger, Sherbrooke
Alternate—Dr. Normand J. Belliveau, Montreal
New Brunswick—Dr. H. Paul Melanson, Moncton
Alternate—Dr. S. D. Clark, Lancaster
Nova Scotia—Dr. R. O. Jones, Halifax
Alternate—Dr. F. J. Granville, Stellarton
Prince Edward Island—Dr. J. A. McMillan, Charlottetown
Alternate—Dr. L. E. Prowse, Charlottetown
Newfoundland—Dr. J. B. Roberts, St. John's
Alternate—Dr. C. U. Henderson, St. John's

On receiving the recommendations of the Nominating Committee the Chairman of the General Council invited nominations from the floor: as no further nominations were made, it was carried unanimously that Dr. M. R. MacCharles be elected President-Elect of The Canadian Medical Association; that Dr. T. J. Quintin be elected Chairman of the General Council; and that Dr. G. E. Wodehouse be elected Honorary Treasurer.

It was also carried unanimously that the members listed be elected to the Executive Committee of The Canadian Medical Association.

In accepting the office of President-Elect, Dr. MacCharles thanked the members and assured them that he would do his utmost to carry out his duties.

Dr. Quintin expressed his thanks for the confidence placed in him by his election as Chairman of the General Council, and hoped he would be able to measure up to the expectations of the challenge offered him. He said that Dr. Murray Douglas had so filled this post as to bring credit both to himself and to the Association.

Dr. Wodehouse also thanked the members of General Council for his re-election as Honorary Treasurer.

Dr. W. W. Wigle said that he was confident he was voicing the wishes of many of the members in suggesting that an official vote of thanks be tendered to Dr. Murray Douglas for his excellent service during his tenure of office as Chairman of the General Council. Dr. Douglas was accorded a standing ovation by the members present.

REPORT OF THE HONORARY TREASURER

Mr. Chairman and Members of the General Council:

89. I submit the financial report for the year ending December 31, 1960, as audited by Messrs. McDonald, Currie and Company, together with brief comments on certain items.

ASSETS

90. You will note our assets now exceed \$922,000.

Unfortunately, as in previous years, this amount does not represent the net worth of The Association, as it continues to include money allocated for the payment of current liabilities, and for long term commitments such as our trust funds.

91. On December 31, 1960 the net worth of The Association was \$731,202 as compared to \$754,471 on December 31, 1959.

92. The reduction in net worth results from the write off of bad debts from previous years, the assumption by The Association of \$8,000 publishing costs outstanding at the end of 1959, and our change in circumstances during the year from a substantial operating surplus in the previous year to a small operating deficit for 1960.

93. The transfer of publishing costs was authorized to coincide with the weekly publication of our Journal, thus permitting the Journal to start its increased activities with a clean balance sheet, and to provide a more understandable comparison of costs in its operation for 1961.

REVENUE AND EXPENDITURES

94. In 1959, total income exceeded expenditures by \$84,000.

In 1960, total expenditures exceeded income by \$1,181.

95. This transfer to deficit financing is explained in part by a very modest reduction in income from the Journal, resulting from increased cost of weekly publication, which exceeded our increased income from advertising.

96. The principal cause of our deficit is the greatly increased secretarial and Association activity during the past year. It seems likely that this increased activity and expenditure will be continuing features, at least for a few years, if not indefinitely.

CANADIAN MEDICAL RETIREMENT SAVINGS PLAN AND CANADIAN MEDICAL EQUITY FUND

97. The Trusteeship Committee, consisting of a representative from each of the Divisions, has met with full representation twice during the year. Your Nucleus Trusteeship Committee has met on two other occasions. At each meeting, there has been a full compliment from our Trustee, The Royal Trust Company of Canada.

98. Your Honorary Treasurer's thanks are due to all these gentlemen, and particularly to Dr. Tweed Samis and Dr. Elmer Mitchell, who with your Honorary Treasurer constitute your Nucleus Trusteeship Committee.

99. C.M.R.S.P. (Canadian Medical Retirement Savings Plan) now has 2,550 participants. Total contributions to the Plan to date exceed \$10,000,000.

100. The value of our common stock units rose from \$10.00 on November 30, 1957 to \$14.17 on February 28, 1961. Your fixed annuity plan administered by the National Life Assurance Company, will pay 5.13% on members' accumulated contributions during the coming year.

101. These figures reflect very clearly the continuing good fortunes of our country in the past four years, and the soundness of the advice and administration we receive from our two fund managers.

102. C.M.E.F. (Canadian Medical Equity Fund) was launched on November 30, 1960, and has met with comparable success. There are now 340 participants, who have invested more than \$375,000 to date. This plan does not offer the tax-deferment benefits which are available under C.M.R.S.P., but appears to offer an excellent opportunity for our members to participate in their own Investment Fund.

103. I have recommended to the Executive Committee that the following transfers be made from the General Fund:

- (a) That \$10,000 be transferred from the General Fund to the Salary and Retirement Fund.
- (b) That \$10,000 be transferred from the General Fund to the Building Sinking Fund.

104. I have also recommended that funds be allocated for grants for post-graduate education at the rate of \$500 per Division, plus \$1.00 for each dues-paying member.

All of which is respectfully submitted.

G. E. WODEHOUSE,
Honorary Treasurer.
Adopted

Dr. R. O. Jones stated that the grants referred to in Section 104 were considered most beneficial throughout the Maritimes.

THE CANADIAN MEDICAL ASSOCIATION
(Incorporated under the laws of Canada)
BALANCE SHEET AS AT DECEMBER 31, 1960

STATEMENT No. 1

ASSETS		LIABILITIES	
		GENERAL FUND	
Cash.....	\$16,693	Revenue received in advance—	
Accounts receivable—		Subscriptions 1961-62, 1962-63.....	\$13,688
Advertising and journal		Memberships 1961.....	1,793
sales.....	56,190		\$15,481
Sundry.....	4,875		
	\$61,065	Accounts payable and accrued liabilities.....	19,138
Provision for doubtful		Canadian Medical Retirement and Savings Plan—	
accounts.....	4,000	Schedule "D".....	22,026
	57,065		
Investments—at cost—Schedule "A"—			
General		Reserve for replacement of building.....	50,000
(quoted market value \$334,398)...	364,670	Surplus—Statement No. 2.....	731,202
Building Fund			
(quoted market value \$48,175)...	49,900		
	414,570		
Prepaid expense.....	2,287		
Fixed assets—			
Land—at cost.....	125,000		
Building—at cost, less amounts			
written off.....	210,232		
Furniture and equipment—at cost,			
less amounts written off.....	12,000		
	347,232		
	\$837,847		\$837,847
		TRUST FUNDS	
Cash.....	\$6,493		
Investments—at cost—Schedule "A"	40,116	Revenue and capital—Statement No. 5.....	46,609
(quoted market value \$36,324)	46,609		
		CANCER FUND	
Cash.....	913		
Investments—at cost—Schedule "A"	8,976	Revenue and capital—Statement No. 6.....	9,889
(quoted market value \$8,725)	9,889		
		RETIREMENT ALLOWANCE FUND	
Cash.....	2,661		
Investments—at cost—Schedule "A"	25,109	Revenue and capital—Statement No. 6.....	27,770
(quoted market value \$24,587)	27,770		
	\$922,115		\$922,115

THE CANADIAN MEDICAL ASSOCIATION
SURPLUS

STATEMENT No. 2

FOR THE YEAR ENDED DECEMBER 31, 1960

Balance—December 31, 1959.....	\$754,471
Less:	
Adjustments re prior years.....	12,088
	\$742,383
Less:	
Excess of expenditure over revenue for the year—Statement No. 3.....	1,181
Appropriation to reserve for replacement of building.....	10,000
	11,181
Balance—December 31, 1960.....	\$731,202

THE CANADIAN MEDICAL ASSOCIATION
REVENUE AND EXPENDITURE—GENERAL FUND
FOR THE YEAR ENDED DECEMBER 31, 1960

STATEMENT No. 3

<i>Revenue</i>			
Membership fees.....		\$236,509	
Investment revenue.....		14,994	
Pension refunds.....		8,535	
Miscellaneous income.....		21	
			\$260,059
<i>Expenditure</i>			
General secretary's office—Schedule "B".....		210,152	
Travelling—Schedule "B".....		58,127	
Special grants—			
Saskatchewan Division.....	\$35,000		
Post-graduate study.....	18,666		
London house.....	1,500		
Dr. Norman H. Gosse.....	500		
		55,666	
Contribution to salary and retirement allowance fund.....		10,000	
Annual Meeting—Statement No. 4.....		834	
			334,779
			(74,720)
<i>Net Revenue from Journal Operations—Schedule "C"</i>			
The Canadian Medical Association Journal.....		72,871	
The Canadian Journal of Surgery.....		626	
		73,497	
Sale of binders.....		42	
			73,539
<i>Excess of Expenditure over Revenue for the Year.....</i>			\$1,181

THE CANADIAN MEDICAL ASSOCIATION
ANNUAL MEETING IN BANFF—JUNE 1960
EXPENDITURE

STATEMENT No. 4

Printing and engraving.....	\$2,882
Travelling and guest's expenses.....	5,171
Hotel.....	6,655
Contribution to host division.....	443
Secretarial aid and miscellaneous expense.....	833
	\$15,984
<i>Less: Revenue from allotment of exhibition booths.....</i>	15,150
	\$ 834

THE CANADIAN MEDICAL ASSOCIATION
TRUST FUNDS
FOR THE YEAR ENDED DECEMBER 31, 1960

STATEMENT No. 5

	<i>Osler Oration Fund</i>	<i>Lister Club Fund</i>	<i>Osler Scholarship Fund</i>	<i>Blackader Lecture Fund</i>	<i>Frederick Newton Gisborne Starr Memorial Fund</i>	<i>Total</i>
<i>Revenue</i>						
<i>Income—</i>						
Income from investments.....	\$ 296	\$ 339	\$ 741	\$ 265	87	
Bank interest.....	18	24	62	13	9	
	314	363	803	278	96	
<i>Expenditure—</i>						
Grants made from trust funds.....	1,043	—	2,000	—	—	
The Royal Trust Company—Fees.....	22	25	56	20	5	
	1,065	25	2,056	20	5	
Excess of income over expenditure for the year.....	(751)	338	(1,253)	258	91	
Cash on hand—December 31, 1959.....	1,762	1,348	3,441	739	520	
Cash on hand—December 31, 1960.....	\$1,011	\$1,686	\$ 2,188	\$ 997	\$ 611	6,493
<i>Capital</i>						
Balance—December 31, 1959 and 1960— Represented by cost of investments— Schedule "A".....	\$7,008	\$7,896	\$16,794	\$6,481	\$1,937	40,116
<i>Revenue and Capital.....</i>						\$46,609

THE CANADIAN MEDICAL ASSOCIATION
SPECIAL FUNDS
FOR THE YEAR ENDED DECEMBER 31, 1960

STATEMENT No. 6

	<i>Cancer Fund</i>	<i>Retirement Allowance Fund</i>
<i>Revenue</i>		
Income—		
Income from investments and bank interest.....	404	1,038
Contribution from general fund.....	—	10,000
	<u>404</u>	<u>11,038</u>
Expenditure—		
Retirement allowances.....	—	9,902
The Royal Trust Company—Fees.....	29	82
Bank charges.....	—	1
Transfer to capital.....	—	969
	<u>29</u>	<u>10,954</u>
Excess of revenue over expenditure for the year.....	375	84
Cash on hand—December 31, 1959.....	538	2,577
Cash on hand—December 31, 1960.....	<u>\$ 913</u>	<u>\$ 2,661</u>
<i>Capital</i>		
Balance—December 31, 1959.....	8,976	24,140
Add: Transfer from revenue.....	—	969
Balance—December 31, 1960—Represented by cost of investments—Schedule "A".....	<u>\$8,976</u>	<u>\$25,109</u>
<i>Revenue and Capital</i>	<u>\$9,889</u>	<u>\$27,770</u>

THE CANADIAN MEDICAL ASSOCIATION
INVESTMENTS

SCHEDULE "A"

AS AT DECEMBER 31, 1960

<i>Par value</i>	GENERAL FUND	<i>Cost</i>
10,000	Canadian National Railway—Bonds: 2¾%—Jan. 2, 1967.....	10,200
5,000	Canadian National Railway—Bonds: 2⅞%—Sept. 15, 1969.....	5,000
12,500	Hydro-Electric Power Commission of Ontario—Bonds: 3%—Dec. 15, 1965.....	11,809
35,000	Hydro-Electric Power Commission of Ontario—Bonds: 3½%—Oct. 15, 1979.....	34,969
27,000	Hydro-Electric Power Commission of Ontario—Bonds: 4¼%—Nov. 1, 1967.....	27,103
15,000	Hydro-Electric Power Commission of Ontario—Bonds: 4½%—Oct. 15, 1974.....	14,793
35,000	Hydro-Electric Power Commission of Ontario—Bonds: 4¾%—Aug. 15, 1975.....	34,606
10,000	Province of Ontario—Debentures: 3%—Dec. 15, 1970.....	10,019
10,000	Province of Ontario—Debentures: 4%—Dec. 15, 1961.....	10,151
25,000	Province of Ontario—Debentures: 5%—Dec. 15, 1975.....	24,719
10,000	Province of Quebec—Sinking Fund Debentures: 3%—Mar. 15, 1965.....	9,587
20,000	Province of Quebec—Sinking Fund Debentures: 3%—July 1, 1969.....	19,424
10,000	Quebec Hydro-Electric Commission—Bonds: 3%—Feb. 15, 1971.....	9,443
15,000	Quebec Hydro-Electric Commission—Bonds: 4%—Mar. 1, 1962.....	14,962
25,000	The Municipality of Metropolitan Toronto—Instalment Debentures: 3½%—Dec. 1, 1965.....	25,031
25,000	The Municipality of Metropolitan Toronto—Sinking Fund Debentures: 3¾%—Nov. 1, 1975.....	23,717
15,000	The Bell Telephone Company of Canada—First Mortgage Bonds: 4½%—Dec. 15, 1967.....	15,207
15,000	Province of Manitoba—Debentures: 3½%—Mar. 15, 1978.....	13,930
50,000	Royal Trust Company—Guaranteed Investment Receipt: 4%—Mar. 20, 1961.....	50,000
		<u>\$364,670</u>
Quoted market value	\$334,398	

THE CANADIAN MEDICAL ASSOCIATION
INVESTMENTS
AS AT DECEMBER 31, 1960

SCHEDULE "A"
(Continued)

Par value	GENERAL FUND	Cost
<i>Building Fund</i>		
10,000	Hydro-Electric Power Commission of Ontario: 4%—Jan. 15, 1976.....	9,938
10,000	Hydro-Electric Power Commission of Ontario: 4¾%—Aug. 15, 1975.....	9,887
10,000	Hydro-Electric Power Commission of Ontario: 4¾%—Feb. 15, 1962.....	9,987
10,000	Canadian National Railway—Bonds: 5½%—Dec. 15, 1964.....	10,150
10,000	Province of Ontario—Debentures: 5½%—May 1, 1970.....	9,938
	Quoted market value \$48,175	\$49,900
<i>Osler Oration Fund</i>		
TRUST FUNDS		
500	Government of Canada—Bonds: 3¼%—Oct. 1, 1979.....	500
500	Hydro-Electric Power Commission of Ontario—Bonds: 3%—Dec. 15, 1965.....	498
3,000	Government of Canada—Conversion Loan: 4¼%—Sept. 1, 1972.....	2,960
3,050	Government of Canada—Conversion Loan: 4½%—Sept. 1, 1983.....	3,050
	Quoted market value \$6,282	\$7,008
<i>Lister Club Fund</i>		
500	Government of Canada—Bonds: 3¼%—Oct. 1, 1979.....	500
500	Hydro-Electric Power Commission of Ontario—Bonds: 3%—Dec. 15, 1965.....	498
1,000	Province of Quebec—Sinking Fund Debentures: 4½%—Jan. 2, 1963.....	985
3,000	Government of Canada—Conversion Loan: 4¼%—Sept. 1, 1972.....	2,955
3,000	Government of Canada—Conversion Loan: 4½%—Sept. 1, 1983.....	2,958
	Quoted market value \$7,232	\$7,896
<i>Osler Scholarship Fund</i>		
TRUST FUNDS		
500	Government of Canada—Bonds: 3¼%—Oct. 1, 1979.....	500
500	Hydro-Electric Power Commission of Ontario—Bonds: 3%—Dec. 15, 1965.....	498
2,000	Hydro-Electric Power Commission of Ontario—Bonds: 4¾%—Aug. 15, 1975.....	1,942
7,000	Government of Canada—Conversion Loan: 4¼%—Sept. 1, 1972.....	6,895
7,050	Government of Canada—Conversion Loan: 4½%—Sept. 1, 1983.....	6,959
	Quoted market value \$15,332	\$16,794
<i>Blackader Lecture Fund</i>		
500	Hydro-Electric Power Commission of Ontario—Bonds: 3%—Dec. 15, 1965.....	498
1,000	Hydro-Electric Power Commission of Ontario—Bonds: 3%—Apr. 1, 1970.....	1,002
500	Hydro-Electric Power Commission of Ontario—Bonds: 4%—July 15, 1974.....	491
100	The City of Drummondville—Debentures: 4%—Aug. 1, 1962.....	103
3,000	The Municipality of Metropolitan Toronto—Sinking Fund Debentures: 4½%—June 1, 1976.....	3,004
700	Government of Canada—Conversion Loan: 4½%—Sept. 1, 1972.....	690
700	Government of Canada—Conversion Loan: 4½%—Sept. 1, 1983.....	693
	Quoted market value \$5,678	\$6,481
<i>Frederick Newton Gisborne Starr Memorial Fund</i>		
1,000	Government of Canada—Conversion Loan: 4¼%—Sept. 1, 1972.....	969
1,000	Government of Canada—Conversion Loan: 4½%—Sept. 1, 1983.....	968
	Quoted market value \$1,800	\$1,937
<i>Total—Trust Funds</i>		
	Quoted market value \$36,324	\$40,116
<i>Cancer Fund</i>		
SPECIAL FUNDS		
2,000	Hydro-Electric Power Commission of Ontario—Bonds: 4½%—Oct. 15, 1974.....	1,972
4,100	Government of Canada—Conversion Loan: 3¾%—Sept. 1, 1965.....	4,004
3,000	Royal Trust Company—Guaranteed Investment Receipt: 5¼%—April 7, 1961.....	3,000
	Quoted market value \$8,725	\$8,976
<i>Retirement Allowance Fund</i>		
4,000	Hydro-Electric Power Commission of Ontario—Bonds: 3%—Mar. 1, 1963.....	3,749
5,000	Hydro-Electric Power Commission of Ontario—Bonds: 4¼%—Nov. 1, 1967.....	5,012
6,000	Quebec Hydro-Electric Commission: 4%—Mar. 1, 1962.....	6,023
2,800	Government of Canada—Conversion Loan: 4¼%—Sept. 1, 1972.....	2,675
2,800	Government of Canada—Conversion Loan: 4½%—Sept. 1, 1983.....	2,681
5,000	Province of Ontario—Bonds: 5½%—May 1, 1970.....	4,969
	Quoted market value \$24,587	\$25,109

THE CANADIAN MEDICAL ASSOCIATION
GENERAL FUND EXPENSES
FOR THE YEAR ENDED DECEMBER 31, 1960

SCHEDULE "B"

General Secretary's Office

Audit fee.....	1,200	
Bad debts.....	3,215	
British Commonwealth Medical Conference.....	1,100	
Building operations.....	13,079	
Bureau of Medical Economics.....	27,045	
Canadian Council on Hospital Accreditation.....	16,000	
Furniture and equipment.....	2,539	
General expenses.....	2,925	
Hospital insurance.....	389	
Interest and exchange.....	365	
Legal fees.....	3	
Management consultant's fee.....	2,000	
Office supplies and stationery.....	5,298	
Pensions.....	4,940	
Postage.....	4,148	
Public relations.....	36,693	
Royal Trust Company—Trustee's fees.....	882	
Salaries.....	73,898	
Telephone and telegraph.....	3,417	
Trans-Canada Medical Plans.....	4,000	
Unemployment insurance.....	615	
Workmen's compensation insurance.....	401	
World Medical Association.....	6,000	
		\$210,152

Travelling

Committee on Medical Economics.....	6,466	
Medical secretaries.....	3,158	
Post-graduate guest speakers.....	4,025	
President and executive committee.....	29,754	
Secretarial.....	5,492	
World Medical Association.....	2,629	
Other committees.....	6,603	
		\$ 58,127

Building Operations

Caretaker's salary.....	3,960	
Depreciation on building.....	11,044	
Heat, light and water.....	5,571	
Insurance.....	418	
Maintenance and repairs.....	2,452	
Property tax.....	3,717	
Moving, renovating and furnishings.....	5,863	
		33,025

Less:

Contributions from—		
Trans-Canada Medical Plans.....	1,775	
Canadian Council on Hospital Accreditation.....	1,296	
Canadian Mental Health Association.....	1,792	
College of General Practice of Canada.....	2,083	
		6,946

Distributed as follows:

Editorial office.....	13,000	
General Secretary's office.....	13,079	
		\$26,079

THE CANADIAN MEDICAL ASSOCIATION
DETAILS OF REVENUE AND COST OF PUBLISHING

SCHEDULE "C"

THE CANADIAN MEDICAL ASSOCIATION JOURNAL AND THE CANADIAN JOURNAL OF SURGERY
FOR THE YEAR ENDED DECEMBER 31, 1960

	The Canadian Medical Association Journal				The Canadian Journal of Surgery			
	Number of issues	53	Per	average	Number of issues	4	Per	average
	Number of copies	885,395	Per	copy	Number of copies	5,549	Per	copy
	Average copies per issue	16,706	Per	issue	Average copies per issue	1,387	Per	issue
<i>Revenue</i>			\$	\$			\$	\$
Advertising.....	507,572				16,913			
Subscriptions.....	21,962				12,864			
Journal sales.....	913				350			
Reprints.....	25,250				2,580			
	555,697		0.63	10,485	32,707		5.89	8,177

THE CANADIAN MEDICAL ASSOCIATION
DETAILS OF REVENUE AND COST OF PUBLISHING
THE CANADIAN MEDICAL ASSOCIATION JOURNAL AND THE CANADIAN JOURNAL OF SURGERY
FOR THE YEAR ENDED DECEMBER 31, 1960

SCHEDULE "C"
(Continued)

	<i>The Canadian Medical Association Journal</i>			<i>The Canadian Journal of Surgery</i>		
	Number of issues	53	Per	Number of issues	4	Per
	Number of copies	885,395	Per	Number of copies	5,549	Per
	Average copies per issue	16,706	copy	Average copies per issue	1,387	copy
<i>Costs</i>						
Agents' commissions.....	15,051			653		
Building operations.....	12,072			928		
Circulation audit.....	180					
Divisional representatives.....	1,576					
Drawing account—						
Managing Editor.....	2,222			278		
Furniture and equipment.....	3,420			120		
General expenses.....	5,060			145		
Hospital insurance.....	340					
Interest, discount and exchange	10,040			452		
Paid contributions.....	2,666			399		
Office supplies and stationery...	1,661			657		
Pensions.....	1,922					
Postage.....	637			213		
Printing—						
Journal.....	331,657			13,209		
Reprints.....	18,226			1,973		
Salaries.....	70,651			12,744		
Telephone and telegraph.....	1,897			104		
Travelling.....	3,081			206		
Unemployment insurance.....	467					
	482,826	0.55	9,110	32,081	5.78	8,020
<i>Excess of Revenue over Costs</i>						
<i>or the year.....</i>	\$ 72,871	0.08	1,375	\$ 626	0.11	157

THE CANADIAN MEDICAL RETIREMENT AND SAVINGS PLAN
FOR THE YEAR ENDED DECEMBER 31, 1960

SCHEDULE "D"

<i>Balance—December 31, 1959.....</i>	\$12,595
<i>Income—</i>	
The Royal Trust Company and The National Life Assurance Company.....	22,625
	35,220
<i>Expenses—</i>	
Salaries.....	4,390
Travelling.....	3,437
Exhibit space rentals.....	1,530
Furniture and equipment.....	242
Printing.....	3,286
Telephone and telegraph.....	46
General expenses and postage.....	263
	13,194
<i>Balance—December 31, 1960.....</i>	\$22,026

AUDITORS' REPORT

We have examined the following financial statements of The Canadian Medical Association:

Balance sheet as at December 31, 1960.

Surplus for the year ended December 31, 1960.

Revenue and expenditure—General fund for the year ended December 31, 1960.

Revenue and capital—Trust funds for the year ended December 31, 1960.

Revenue and capital—Special funds for the year ended December 31, 1960.

We have obtained all the information and explanations we have required. Our examination included a general review of the accounting procedures and such

APPENDIX I

tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion, and according to the best of our information and the explanations given to us and as shown by the books of The Association, the accompanying financial statements are properly drawn up so as to exhibit a true and correct view of the state of the affairs of The Association as at December 31, 1960 and the results of its operations for the year ended on that date, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

McDONALD, CURRIE & CO.
Chartered Accountants.

TORONTO, 23 February, 1961.

REPORT OF THE EDITOR

Mr. Chairman and Members of the General Council:

105. With apologies for the length of this report it is considered that Council should be provided with a full accounting of your editor's activities and plans after the first year of his tenure.

106. 1960 also marked the completion of the first year of weekly publication of the C.M.A. Journal. The various components of the editorial and publishing department appear to have satisfactorily accomplished the adjustment required to meet 53 deadlines during the past calendar year. Your attention is drawn to the fact that the C.M.A. publications section is now producing close to a million journals annually, considerably more than twice the number printed in 1959. You will observe from the Managing Editor's report that this involves business operations well in excess of half a million dollars per year. Certain implications of this rapid business expansion should be recognized. Of the publications department's 1960 revenue of approximately \$556,000, upwards of \$507,500 was derived from advertising, the major portion of which concerned pharmaceutical products. In recent years, profits derived from C.M.A. publications have contributed materially to the gross revenue of The Association as a whole. It is likely that any significant reduction in proceeds from this department would have considerable influence on many phases of The Association's activities. These observations are recorded in this report to emphasize the extent to which C.M.A. financial structure could conceivably be affected by official pronouncements or policies adopted by The Association in relation to the pharmaceutical manufacturing industry. Whether or not such a degree of dependency on revenue from this source is desirable may well require careful consideration.

*Moved by Dr. E. B. Stewart,
seconded by Dr. F. J. Granville*

that the last two sentences of Section 106, commencing "These observations"... and ending "careful consideration" be deleted.

Carried

107. The backlog of all types of articles for subsequent publication has gradually been reduced to a minimum and an increased volume of all such contributions is now required.

108. The editorial staff is particularly grateful to the faithful contributors of abstracts from the world's medical literature, news notes and editorial comments. The requirement for these items has almost doubled since weekly publication was instituted.

109. In the view of your editors, one of the obligations of an official journal of a national medical association is the regular provision of review-type articles on current concepts of diagnosis and treatment covering a broad range of medicine and surgery, of practical value to general physicians and pertinent to common problems of everyday practice. Unfortunately, communications of this type are volunteered only sporadically. If they are to be published regularly, a backlog of such articles would be constantly required well in advance of their publication dates. This would, of necessity, involve the planned recruiting and/or commissioning of such contributions, a procedure that would necessitate frequent visits by the editor to various centres across the country. This has not been possible with an editorial staff of the present strength.

110. The C.M.A. Journal must also provide a forum for publication, in this country, of the work of those engaged in the ever increasing volume of research and clinical investigation being conducted across Canada. It is my impression that a certain amount of such investigation is not being reported and that some work of this nature is being submitted to general medical journals in other countries. This comment is not in any sense a reflection of editorial paranoia but the fact is that until the major proportion of such material is published in Canada's national medical journal our publication will not achieve its potential standard of excellence and the quality of Canadian medicine will not be presented to the world with true accuracy. That the C.M.A. Journal is viewed as the mirror of Canadian medicine has been impressed upon me during my brief tenure of editorial office by evidence of the extent to which it is read in diverse areas of the world beyond this country. To a large extent irrespective of the ability and industry of the editorial staff the standard of any medical periodical is, in the final analysis, dependent upon the volume and quality of the submissions of those who contribute to its contents. The active and continued co-operation of all components of the profession is therefore solicited in our endeavour to elevate the C.M.A. Journal to the highest possible standard of quality.

111. In accord with my predecessor's frequently stated view we consider that the Journal has an obligation to provide the C.M.A. membership with a regular supply of news concerning the activities, plans, recommendations and official pronouncements of The Association and its numerous committees. Periodic reports of this nature prepared for publication in the Journal will be welcomed from all committees though it is recognized that such reports would require approval by the Executive Committee to avert any untoward effects of premature release of such material. In this respect all meetings of the Executive Committee and General Council during the past year have been reported fully in the Journal.

112. We also share the opinion previously stated by Dr. Gilder that scientific meetings of major significance both within and outside Canada should receive generous coverage in the Journal's pages. It is highly desirable that the editor should have freedom to attend such meetings not only for the purpose of reporting their proceedings but for the even more important purpose of establishing and maintaining contacts with sources of contributions to various departments of the Journal. This has not been possible during the past year due to the understaffed state of the editorial department although full coverage has been given in the Journal to the annual meetings of The Royal College of Physicians and Surgeons of Canada, the Association of Canadian Medical Colleges and the Canadian Society for Clinical Investigation. In addition we have been fortunate in receiving excellent reports of several important scientific meetings held in Canada and abroad, from volunteer rapporteurs. As in the past, a standing invitation is extended to all Canadian specialist societies to submit reports of their scientific meetings for publication in the Journal.

113. Since the last meeting of General Council, two special editions of the C.M.A. Journal have been printed, the first in recognition of the fiftieth anniversary of its publication, the second comprising the annual Medical Education number. The editorial staff is grateful to the many talented contributors of the contents of these issues.

114. The editors believe that a useful function may be served by the occasional publication of issues containing

a series of articles pertinent to a particular area of medicine, together with editorial comment from an authority in that field. In the past year individual editions have contained symposia on the subjects of atherosclerosis, alcoholism and child psychiatry, presented in this manner.

115. As a service to the Divisions, the Journal provides space in each issue for publication of news from the provincial Associations. Contribution of the contents of this section of the Journal is a function and responsibility of the Divisions. This is carried out with varying degrees of regularity and enthusiasm in different areas of the country. While detailed news reports are faithfully submitted by a number of provincial correspondents, more active interest and participation in this program on the part of other Divisions would appear desirable.

116. Since last July the editorial functions involved in publication of The Association's two journals have been carried out by one Associate Editor and the undersigned and I would take this opportunity to record my recognition and appreciation of the capable and painstaking support provided by my Associate Editor, Dr. Gordon Dickinson. The publications department has sorely missed the experienced and able services of Dr. Maurice Dufresne since his departure in July, 1960. By the time this report is presented to General Council the editorial staff will have been augmented by the addition of a second Associate Editor, Dr. John O. Godden, presently on the staff of the Faculty of Medicine of Dalhousie University. Dr. Godden's appointment to this post has already been announced in the Journal, in the report of a previous Executive Committee meeting. As mentioned in the report of the Acting Editor to this Council at the 93rd Annual Meeting, however, even a staff of one editor and two associate editors, while capable of meeting present demands reasonably satisfactorily, leaves no leeway for such contingencies as illness, vacation periods, unforeseen exigencies that crop up from time to time, or for the time and effort required for further development and improvement of our publications. In addition the lack of an associate editor with bilingual ability has created a major deficiency in the editorial staff that remains to be filled. If it appears feasible from all points of view to acquire the full-time services of such an individual after the second Associate Editor has been with us for a reasonable period, it is respectfully suggested that such additional appointment be given further consideration.

117. The *Canadian Journal of Surgery*, in my opinion, is a general surgical journal of particularly high standards, in which this Association may take justifiable pride. The steady improvement in its quality is due in large part to the expert guidance it receives from Dr. Robert Janes and the vigour, experience and active co-operation of his Editorial Board and their panel of advisers in various special fields of surgery. It is worthy of mention in this report that a single promotional campaign conducted by the Managing Editor and his staff in January of this year, resulted, within a period of a few weeks, in an increase of more than 25% in the circulation of the *Canadian Journal of Surgery* to its present level of approximately 1,450. In view of a gradually increasing flow of contributions it may become desirable to increase the frequency of publication of the *Canadian Journal of Surgery* in the not-too-distant future. Should this be the case it would constitute further justification for considering the addition of a third Associate Editor to the publications staff.

118. Finally I wish to acknowledge with gratitude the valuable advice and guidance of the editorial advisory

boards of our two publications. Their ever ready assistance has been invaluable in making difficult decisions regarding many articles that deal with subjects beyond the Editor's field of clinical knowledge and their freely offered constructive criticisms should be most helpful to the authors of many papers that are submitted for publication.

All of which is respectfully submitted.

D. C. GRAHAM,
Editor, C.M.A. Publications.

Moved by Dr. D. C. Graham,
seconded by Dr. T. J. Quintin,
that the Report of the Editor, as amended, be adopted.
Carried

REPORT OF THE MANAGING EDITOR

Mr. Chairman and Members of the General Council:

119. Your weekly Journal, in its first year of publication (1960), showed an operating profit of \$72,871.00, as will be seen in the following comparative statement.

	1959	1960
Pages of Advertising.....	1,851	2,009
Editorial Pages.....	2,164	3,006
Journals Printed.....	419,898	953,538
Advertising Revenue.....	395,820	507,572
Other Revenue.....	54,939	48,125
Printing Costs—Journal.....	244,717	331,657
Reprints.....	19,195	18,226
Other Costs.....	111,954	132,943
Net Profit.....	74,893	72,871

120. It is a pleasure to report that, despite the many changes, and re-arrangements, which had to be carried out, especially by the printers, and the heavy load which fell upon our Editorial and Business staff, fifty-three, seven-day deadlines were met in 1960 without a hitch.

121. The task was not made easier by the fact that three different Editors had a hand in the year's work, each one in turn doing the work of two men.

122. As this report is being written it is comforting to know that the extremely heavy load which the Editors are carrying will be lightened when Dr. John O. Godden, of Halifax, joins the staff.

123. It would appear that the weekly Journal has made a good start and that it may look forward hopefully to many long years of service to the members of The Canadian Medical Association and to doctors in many other parts of the world, in the dissemination of knowledge and information.

* * * *

124. The *Canadian Journal of Surgery* in its third year of publication showed a modest profit of \$605.00.

125. A drive, carried out early in 1961, resulted in recruiting 250 new subscribers, the total now being 1,436.

126. Once again it is gratifying to be able to report that splendid team work within the staff and excellent relations with the printers and advertisers all contribute to the success which we feel your publications are enjoying.

All of which is respectfully submitted.

T. C. ROUTLEY,
Managing Editor.

Moved by Dr. T. C. Routley,
seconded by Dr. W. W. Baldwin,
that the Report of the Managing Editor be adopted.
Carried

REPORT OF THE COMMITTEE ON ECONOMICS

Mr. Chairman and Members of the General Council:

127. Since Dr. R. K. Thomson last reported to the General Council at Banff, June 13-14, 1960, your Committee on Economics has met twice—December 5-6, 1960 and March 26-27, 1961. Four members of your Committee constitute the Committee on Prepaid Medical Care, which has met twice. Three members of your Committee have been appointed to aid the President, the Chairman of the General Council and the General Secretary on the Executive Sub-Committee on Health Services with special duties referable to the C.M.A. relations to the Royal Commission on Health Services. Your Chairman attended all these meetings as well as those of the Executive.

The Chairman, Dr. McMillan, suggested that the word "constitute" in the second sentence of this paragraph be replaced by "are"; also in the same sentence the word "twice" be replaced by "three times".

Adopted as amended

128. Mr. B. E. Freamo, Secretary, Medical Economics, acts as secretary of the Committee on Economics, while Dr. A. D. Kelly, Dr. A. F. W. Peart and Mr. K. C. Cross attend meetings and assist our deliberations. Many observers were welcomed from time to time. We are pleased to mention, particularly at this time, that l'Association des Médecins de Langue Française du Canada has appointed Dr. André Leduc as an ex officio member of the Executive Sub-Committee on Health Services, thus establishing a very significant liaison of which both our Associations are indeed proud.

Adopted

129. One year has now elapsed since the adoption of the standardized insurance claim forms for general use by the C.M.A. and the C.H.I.A. By and large, satisfaction has been reported. Some minor changes have been brought to your Committee's attention and arrangements to have the assignment printed on the back of the forms has been finalized. Your Committee recommends that minor changes continue to be implemented to make the forms as acceptable as possible.

Adopted

To a suggestion by Dr. A. A. Haig that the standard insurance claim forms be again reviewed, as it was the feeling that at present they were too complicated, Dr. Peart replied that these forms have been generally accepted by the life insurance industry in Canada.

130. Last year a progress report was made on the relative value studies. Since that time little further progress has been made. Pressure on the secretariat by more immediate and unforeseen problems has resulted in a slow-down on this project for the time being. The work is however continuing.

Dr. N. J. Blair stated that the report of the relative value studies was most important and should be completed as soon as possible, and Dr. M. O. Klotz and Dr. R. H. McCreary supported this view. Dr. Rabson pointed out the difficulty encountered in attempting to define what is meant by procedure—what it involved and the discrepancy in opinions.

*Moved by Dr. N. J. Blair,
seconded by Dr. T. S. Perrett,*

that the C.M.A. employ as many individuals as is necessary to complete the relative value schedule with all possible dispatch.

Carried

131. Last year the General Council studied at great length the C.M.A. Statement on Medical Services Insurance. This document attempted to incorporate all the previous thoughts of the C.M.A. as well as the current thinking of the profession. It was presented to you at Banff last June and has since been widely distributed. All Divisions have accepted the general content of this Statement. Some have published it verbatim as their own. A few have made slight modifications for their individual needs.

*Moved by Dr. L. C. Grisdale,
seconded by Dr. R. K. Thomson,*

that a copy of the C.M.A. Statement on Medical Services Insurance be suitably prepared and distributed to all members of the medical profession in Canada.

Carried

132. Your Committee commended the Executive on the distribution of this document to Federal Members of Parliament. Subsequently, the Executive of the C.M.A. suggested to the Divisions the possibility of each Division providing members of Provincial Governments with copies. Many Divisions have, we believe, carried out this suggestion.

Adopted

CLINICAL MEDICAL SERVICES UNDER FEDERAL HOSPITAL INSURANCE AND DIAGNOSTIC SERVICES ACT

133. Briefly stated, a problem has arisen regarding the pattern of providing personal medical service to extended stay and chronic institutional patients. The Canadian Hospital Association has expressed the belief that a real hardship to some hospitals ensues from the traditional medical viewpoint that such care should not be included under National Hospital Insurance. Considerable discussion and a Division by Division review of existing practice indicated some diversity of current handling of the problem. It was obvious that this phase of medical care would become more important as time went on. No single solution appeared at hand. Your Committee recommended to the Executive:

"That a joint committee of the C.M.A. and the C.H.A. be set up to discuss the question of medical care for the chronic care patients."

Such a Committee is now in existence and the problem is at the moment in the hands of this joint committee.

Adopted

THE SASKATCHEWAN SITUATION

134. Your Committee reviewed the activities of the Saskatchewan Division and discussed pertinent portions of the brief presented to the Advisory Planning Committee. It was felt that much had been learned from the work of our confreres in that Province. At the March meeting a further review of the activities of the profession in Saskatchewan was made. Recent events were reported in some detail but since none of the problems involved were referred to your Committee we make no detailed reports on these discussions.

Adopted

135. Your Committee heard a review of the work of the Special Committee on Prepaid Medical Care, through Dr. Rabson, Chairman of this Committee. Progress in developing principles underlying good medical care and methods of extending the benefits of prepayment to all Canadians

were discussed. This Committee will make a more definitive report to the Executive Committee.

Dr. D. I. Rice stated that some coordinating body is required if the C.M.A. wishes to extend benefits of prepayment to all Canadians.

*Moved by Dr. D. I. Rice,
seconded by Dr. A. A. Giffen,*

that Council instruct the Committee on Economics and the Executive Committee to review the terms of reference of T.C.M.P. to ascertain whether or not this organization under its present terms of reference is capable of serving the C.M.A. in providing a broadened coverage for the Canadian public in the field of benefits provided and the expansion of the numbers covered as expeditiously as possible.

Carried

POLITICAL ACTIVITY IN THE FIELD OF MEDICAL SERVICES INSURANCE

136. Your Committee accepted as fact that all major Federal Political parties are interested in medical services insurance on a tax-supported basis. There is some evidence that more than one party may even include it as a major part of a political platform. Most of the members of the Committee felt very strongly that their Divisional experience confirmed these opinions.

Adopted

137. Lengthy discussion resulted in strong agreement that the profession should initiate a program of forceful leadership and offer a more aggressive policy in the whole health field. It was accordingly unanimously proposed:

"That this Committee recommend to the C.M.A. Executive that the C.M.A. approach the Federal Government to ask them to establish a committee to study the existing and projected health needs and health resources of Canada; and to study methods of ensuring the highest standard of health care for all citizens of Canada, bearing in mind the C.M.A. Statement on Medical Services Insurance."

Adopted

138. It was suggested that the Executive be informed that this might be urgent enough to require a special meeting to consider this matter. It was further suggested that the Executive inform l'Association des Medecins de Langue Francaise du Canada of their decision and invite them to collaborate with C.M.A. in this project.

Adopted

139. You have been told elsewhere of the events following this motion, which culminated in the announcement of the Royal Commission on Health Services.

Adopted

ECONOMICS DAY PROGRAM

140. The principle of having a specific Economics section of the Annual Meeting of C.M.A. has been established at least for the present. Your Committee collaborated with the program committee in setting up a Special Economics Day—this year the final day of the convention. Arrangements for speakers and program were studied by your Committee. The final format of the program was approved.

Adopted

EXECUTIVE SUB-COMMITTEE ON HEALTH SERVICES

141. This Committee reports directly to the Executive and through them to Council. This Committee however

discussed some of the problems involved with their work, outlined some of the suggestions made, and reviewed with your Committee the probable role of the Committee on Economics and the various Divisional counterparts. Details will be presented to you for discussion on another occasion.

Adopted

THE AUSTRALIAN PROGRAM

142. The members of your Committee were instructed to study in detail several documents already available on the Australian Program of Medical and Hospital Insurance. With this background information a long discussion period was held at the March meeting with special reference to a current report prepared by the C.M.A. representatives who recently visited Australia.

Adopted

143. Doctors Quintin and Banks and Mr. Freamo supplemented their official report with more detailed and intimate outlines of their findings and their personal reactions to the Australian Program. Although your Committee was not charged with any definitive action on this work, the great significance of this report seemed to demand some immediate action. Your Committee therefore suggested:

"That the Economics Committee ask the Executive to consider immediately the publication of this report in the Journal so that its content may be widely studied."

Your Committee therefore simply reports on this matter for information only.

Adopted

ECONOMICS NEWSLETTER

144. During recent years the Economics Newsletter has been prepared by the Secretariat and sent out to about five hundred members. Although it has enjoyed an enthusiastic response, there was a suggestion that it might be replaced by an expanded Economics News Section in the Journal. All the pros and cons of such a proposition were discussed at great length. The following resolutions resulted:

1. That an increase in the Economics News Section of the Journal be undertaken and that this section be placed in a prominent position in the front section of the Journal.
2. That the Secretariat continue to prepare and circularize the already established Economics Newsletter at least quarterly.

Adopted

In the opinion of Dr. L. R. Rabson more frequent interchange of opinions on the important matter of the economics of medical care is necessary to keep the members of the various Divisions fully informed.

*Moved by Dr. L. R. Rabson,
seconded by Dr. J. B. Roberts,*

WHEREAS a more frequent interchange of ideas regarding the economics of medical care is desirable within the Divisions of The Canadian Medical Association,

THEREFORE BE IT RESOLVED that this Council recommend to the Executive Committee that teams dealing with the economics of medical care be made available to Divisional meetings in order that an interchange of ideas across Canada be thereby facilitated.

Carried

MEDICAL PROBLEMS IN THE HOSPITAL INSURANCE PROGRAM

145. It was brought to the attention of your Committee that governmental provision of certain types of medical services, besides the care of the chronically ill mentioned previously, continues in certain areas. A review of methods of remuneration and terms of employment of Physicians by Government Agencies including Hospital Commissions, Cancer Control Programs, Laboratory Services, etc., etc. indicated that no definite pattern has emerged. Since a discussion of these problems is to be presented as part of the program for Economics Day, no action was taken at the present time.

Adopted

All of which is respectfully submitted.

J. A. McMILLAN,
Chairman.

Personnel of the Committee: Divisional Representatives:

Dr. J. A. McMillan, Charlottetown (Chairman)
Dr. P. J. Banks, Victoria
Dr. D. F. McPherson, Lethbridge
Dr. E. W. Barootes, Regina
Dr. L. R. Rabson, Winnipeg
Dr. G. E. Wodehouse, Toronto
Dr. T. J. Quintin, Sherbrooke
Dr. J. F. McInerney, Fredericton
Dr. H. E. Christie, Amherst
Dr. A. R. Grant, Summerside
Dr. J. D. Baird, St. John's

*Moved by Dr. J. A. McMillan,
seconded by Dr. C. H. Crosby,*

*that the Report of the Committee on Economics be
adopted as amended.*

Carried

REPORT OF THE COMMITTEE ON INCOME TAX

Mr. Chairman and Members of the General Council:

146. At the last Annual Meeting of The Canadian Medical Association in Banff, the General Council passed the following resolution—"That the Committee on Income Tax seek recognition that postgraduate refresher courses should be deductible expense from income tax." This resolution was passed on to the Committee on Income Tax, and the attempt to accomplish this constituted its work over the past year.

147. A tentative draft of a submission to Government was prepared and sent to the members of the Committee for their thoughts and comments concerning it. We also engaged a consultant whom we felt to be one of the best in this field.

148. As you know, the basis of our approach to the Minister was to present the postgraduate course as a capital cost, attempting to show its analogy to borrowing money for the purpose of earning income. We tried to show that expenditures incurred by the physician in acquiring new knowledge, skills and techniques for carrying on his profession (which by law is a business) are in the same category as the expenses of the business-man incurred in acquiring new capital for his business.

149. A meeting was arranged with the Honourable Donald Fleming, the Minister of Finance, for January 27, 1961.

Our numbers were somewhat depleted due to previous meeting commitments. We met in Ottawa at The Royal College on January 26, 1961, and we spent some time with Dr. A. K. Eaton, our consultant, on our brief.

150. The brief was prepared in its final form with the generous help of the staff of The Royal College of Physicians and Surgeons.

151. We met the following day with Mr. Fleming and his Deputy, and presented the brief. I must say we had a fair hearing, and they were most interested in our approach to this problem. We have not as yet heard from the Government as to whether or not our efforts were successful. It is our hope, however, that the Budget address which will be presented before the meeting of the General Council, may refer to the amendment to the Income Tax Act which we have proposed.

152. I would like to express my thanks to all the members of my Committee with special thanks to Dr. A. D. Kelly for his unfailing assistance. He is an excellent coordinator and of inestimable value to our Association.

All of which is respectfully submitted.

N. J. BLAIR,
Chairman.

Personnel of the Committee:

Dr. N. J. Blair, Vancouver (Chairman)
Dr. G. E. Chalmers, Fredericton
Dr. M. O. Klotz, Ottawa
Dr. T. J. Quintin, Sherbrooke
Dr. K. R. Trueman, Winnipeg.
Dr. G. E. Wodehouse, Toronto (ex officio)
Dr. A. D. Kelly, Toronto (ex officio)

*Moved by Dr. N. J. Blair,
seconded by Dr. T. J. Quintin,*

*that the Report of the Committee on Income Tax be
adopted.*

Carried

REPORT OF THE COMMITTEE ON APPROVAL OF HOSPITALS FOR JUNIOR INTERN TRAINING

Mr. Chairman and Members of the General Council:

153. I wish to report that your Committee had another busy year last year. The Committee reviewed the applications of 49 approved hospitals which were due for reappraisal, 8 provisionally approved hospitals, and 8 new applications. At the present time there are 50 fully approved hospitals for junior intern training and 26 provisionally approved for one or two years.

154. Your Committee is still confronted with the problem of having many more approved internships than there are available interns to fill them. This situation is most frustrating to the medical staffs of less fortunate hospitals, as it is difficult for them to develop good educational programs with few if any interns to train. It is also unfair to the junior interns who find themselves in large hospitals with too much to do and no regular training on any particular service.

155. Although General Council last year approved a policy of requiring new applicants to have 300 general hospital beds rather than 150 as previously, the number of approved hospitals continue to grow. This further dilutes the intern population particularly in the hospitals outside of university centres. This problem has partly resulted because hospitals are now able to pay junior interns out of provincial hospital grants; whereas previously there often was insufficient funds for these services.

156. The Committee believes some new policy of approval of hospitals will have to be devised which will divert junior interns into a limited group of hospitals best able to train them. Your Committee will continue studying this problem and will be making recommendations to this Council in due course.

157. During the past year your Committee considered the definition of a "teaching unit" in hospitals where undergraduate medical education is carried out. The following definition was proposed by the Committee on Medical Education and was accepted by my Committee:

"A teaching unit is a hospital or a group of beds in a designated area of a hospital, in which the care of the patient is the function of the team of staff physician-resident-intern-clinical clerk. The medical staff of such a teaching unit is to be appointed jointly by University and Hospital and organized as departments, the heads of which are similarly jointly appointed by University and Hospital."

158. A meeting of the Committee was held on January 30 and 31, 1961, at C.M.A. House. We were pleased to have with us at that time Dr. J. A. MacFarlane, Dean of the Faculty of Medicine at the University of Toronto, Dr. J. C. C. Dawson, Registrar-Treasurer of the College of Physicians and Surgeons of Ontario, and Dr. Gerard Monfette and Mr. Daniel Wise representing C.A.M.S.I.

159. The Committee considered the desirability of using the qualification of the Educational Council for Foreign Medical Graduates as a screening mechanism for eliminating less qualified foreign medical graduates from coming to Canada as immigrants or for advanced medical training. This qualification is accepted by the American Medical Association and American Hospital Association, and has recently been made mandatory for hospitals in the United States.

160. Your Committee recommends that foreign medical graduates be encouraged to take their E.C.F.M.G. examinations before coming to Canada, and that hospitals be advised to accept only those foreign graduates with their E.C.F.M.G. certificate. The Committee recommends further that hospitals be required to accept only those foreign medical graduates with their E.C.F.M.G. certificate after July 1, 1962. All the licensing authorities agree to this requirement in principle, and some of them have put it into effect. If this recommendation is approved, we would request authority to have the Secretary write to hospitals and registrars in Canada advising them of this recommendation.

In reply to a request from Dr. J. B. I. Sutherland for clarification of certain statements in Sections 159 and 160, Dr. Bramley-Moore stated he felt the recommendation by this Committee is a step towards better selection of postgraduate students and further training beyond internship. He also pointed out that the E.C.F.M.G. examination has become a requirement in some provinces for individuals coming to Canada for training.

161. C.A.M.S.I. has asked your Committee for assistance in developing questionnaires for surveys of C.A.M.S.I. members in respect to junior intern training. We are pleased to be of service to C.A.M.S.I. in this matter as well as the provision of education material for its members.

162. In discussing the remuneration of interns with C.A.M.S.I., your Committee has suggested that the Divisions of the C.M.A. establish some machinery for liaison with C.A.M.S.I., with a view to discussing the remuneration of interns with hospitals in their provinces.

General discussion took place on the question of remuneration of interns and it was suggested that it might be advisable to delete Section 162.

The opinion was expressed that this was not a responsibility of the C.M.A. but of the Canadian Hospital Association. On a vote, the recommendation for deletion of this section was out-voted.

163. Your Committee continues to appreciate the reports of the field surveyors of the Canadian Council on Hospital Accreditation. These surveyors provide on-the-spot assessments of the quality of junior intern training received in hospitals, and the attitude of the medical staff toward their training program.

All of which is respectfully submitted.

L. O. BRADLEY,
Chairman.

Personnel of the Committee:

Dr. L. O. Bradley, Winnipeg (Chairman)
Dr. J. F. C. Anderson, Saskatoon
Dr. Donald Munroe, Vancouver
Dr. A. F. W. Anglin, Toronto
Dr. Roger Dufresne, Montreal
Dr. Lea C. Steeves, Halifax
Dr. E. W. Nancekivell, Hamilton
Dr. A. F. W. Peart, Toronto (Secretary)

Executive Committee Comment

164. In view of the opinions received from various parts of the world, which would indicate the desirability and acceptability of a purely Canadian examination for prospective interns from foreign lands and, with reason to believe this would increase the number of available interns as well as assist with medical training for doctors in needy areas of the world;

165. The Executive Committee recommends that we request the Medical Council of Canada to consider the establishment of a Canadian examination to serve the purpose of the present Educational Council for Foreign Medical Graduates which would be distributed through The Canadian Medical Association and The World Medical Association.

A recommendation for the deletion of Sections 164 and 165 was not adopted.

*Moved by Dr. L. O. Bradley,
seconded by Dr. P. J. Banks,*

that the Report of the Committee on Approval of Hospitals for Junior Intern Training be adopted.

Carried

REPORT OF THE COMMITTEE ON APPROVAL OF SCHOOLS FOR LABORATORY TECHNOLOGISTS

Mr. Chairman and Members of the General Council:

166. The second meeting of the Committee on Approval of Schools for Laboratory Technologists was held in the Board Room of C.M.A. House on February 6 and 7, 1961. Those in attendance were as follows:

Dr. D. F. Moore, Saskatoon (Chairman)
Dr. W. J. Deadman, Toronto
Dr. J. Eden, Vancouver
Dr. I. A. MacLennan, Moncton
Dr. D. W. Penner, Winnipeg
Dr. H. Starkey, Montreal
Miss I. Kemp, Hamilton (Rep. C.S.L.T.)
Mr. B. Wood, Hamilton (Rep. C.S.L.T.)
Dr. A. F. W. Peart, Toronto (Secretary)

167. The emergence of a variety of central school programs for the training of medical laboratory technologists has created much concern on the part of this Committee as to its proper functions.

REVISION OF THE BASIS OF APPROVAL

168. A revised Basis of Approval of Hospital Laboratories for Training Laboratory Technologists was submitted by a sub-committee of Dr. W. J. Deadman, Miss I. Kemp, and Dr. A. F. W. Peart, as appointed at the 1960 meeting of this Committee. Arising out of the ensuing discussion were several amendments. The final version as accepted by the Committee is appended.

C.S.L.T. CERTIFICATION PROGRAM

169. The major points of the C.S.L.T. Certification Program have been outlined in the revised Basis of Approval of Hospital Laboratories for Training of Medical Laboratory Technologists (appended).

170. Prior to February 1961, The Canadian Medical Association through its Committee approved various types of training programs including those in hospitals, universities, and governmental or municipal laboratories. It also granted approval for specialized training in various aspects of laboratory work, as well as training for the General Certificate. With the reorganization of C.S.L.T. membership requirements in 1960, the C.M.A. approval program now applies only to the General Certificate and is confined to general hospital laboratories.

171. Your Committee has discussed the new function of the C.M.A. Committee, in view of the Certification Program and wishes to express concern about the seeming lack of supervision of the practical training portion of Central Training programs. The present intent is to have the directors of Training Schools be responsible for the practical portion of the course which is carried out in affiliated laboratories. Several members of the Committee felt that some medical body such as the C.M.A. Committee or the Advisory Council of C.S.L.T. should approve this practical training.

172. The following resolution was duly passed by the Committee and is submitted for your consideration:

"THAT WHEREAS this Committee believes its main function in the past, in cooperation with C.S.L.T., has been to promote and maintain the best possible facilities for training technicians in hospital laboratories, and

WHEREAS the Committee appreciates that its present function calls primarily for a speedy re-examination of the complete in-service training courses, and WHEREAS the Committee is concerned with the hospital portion or in-service training of students undertaking courses in laboratory technology in all centralized training programs, THE COMMITTEE THEREFORE RECOMMENDS that the C.M.A. suggest to C.S.L.T. that it consider ways and means of ensuring adequate assessment of the hospital in-service portion of these training programs."

BASIS OF APPROVAL

173. If the revised Basis of Approval is adopted by the General Council of the C.M.A. at this meeting, the C.M.A. will then proceed to ask presently approved laboratories to reapply for approval. This would apply first to those approved before 1955, which would constitute about 80 applications. After June 1961, the C.M.A. would then write to central schools explaining the situation and advising them that they will not come within the purview of the C.M.A. Committee unless they have a complete course of training within their laboratory.

PROCESSING OF APPLICATIONS

174. Because of the large number of applications to be reviewed, it is proposed that they be circulated to members of the Committee first to get an evaluation for future disposition. Committee members will be asked to indicate:

1. If the laboratory should be inspected.
2. Deficiencies in the training program.
3. Good features of the training program.

If the Committee recommends inspection, Dr. Peart will then ask the Committee member nearest to the hospital to inspect the laboratory concerned. If no inspection is considered necessary because of information contained in the application, these applications will be approved on the recommendation of the Committee members. Revised application forms have also been prepared to conform to the new Basis of Approval and to supply more pertinent information than heretofore.

MEMBERSHIP OF COMMITTEE

175. During the past year your Committee has lost the valuable services of Dr. John Macgregor of Edmonton, who had served as chairman for several years and whom I am sure you would wish to thank for his past services. The Committee was pleased to welcome Dr. I. A. MacLennan to its membership and also recommended a second French Canadian member, who is yet to be appointed.

All of which is respectfully submitted.

D. F. MOORE,
Chairman.

Personnel of the Committee:

Dr. D. F. Moore, Saskatoon (Chairman)
Dr. C. Auger, Quebec
Dr. W. J. Deadman, Toronto
Dr. J. Eden, Vancouver
Dr. I. A. MacLennan, Moncton
Dr. D. W. Penner, Winnipeg
Dr. H. Starkey, Montreal

The Chairman, Dr. D. F. Moore, announced that since the preparation of the Report, the resignation of Dr. C. Auger had been received with regret.

Dr. F. W. Wigglesworth questioned whether a concept could be developed for a definite outline of internship for

laboratory technologists in an approved hospital rather than in a university or central school, with a properly organized and controlled type of training program.

*Moved by Dr. F. W. Wigglesworth,
seconded by Dr. S. C. Best,*

that a joint Committee be set up, consisting of the C.M.A. and those affiliated specialist societies who are interested in studying the problem of technician education and its relationship to medical services, with particular reference to the so-called "internship" in central schools.

Carried

*Moved by Dr. D. F. Moore,
seconded by Dr. W. W. Baldwin,*

that the Report of the Committee on Approval of Schools for Laboratory Technologists be adopted as amended.

Carried

CANADIAN MEDICAL ASSOCIATION BASIS OF APPROVAL OF HOSPITAL LABORATORIES FOR TRAINING MEDICAL LABORATORY TECHNOLOGISTS

INTRODUCTION

176. The following pages and attached material outline requirements and standards of training for medical laboratory technologists which will qualify candidates to write the General Certificate examination of the Canadian Society of Laboratory Technologists. The successful completion of this examination will qualify the individual for annual registration as a Registered Technologist. The approval program described herein is operated jointly by the C.M.A.'s Committee on Approval of Hospital Laboratories for Training Medical Laboratory Technologists and the Canadian Society of Laboratory Technologists, and is designed to improve the quality of training of laboratory technologists in Canada.

177. Prior to February 1961, The Canadian Medical Association through its Committee approved various types of training programs including those in hospitals, universities, and governmental or municipal laboratories. It also granted approval for specialized training in various aspects of laboratory work, as well as training for the General Certificate. With the reorganization of C.S.L.T. membership requirements in 1960, the C.M.A. approval program now applies only to the General Certificate and is confined to general hospital laboratories.

178. The approval program described below, therefore, applies only to training of medical laboratory technologists in hospital laboratories, through which the complete training program (theoretical and practical) is provided. Those courses in universities and public health departments which are training or wish to train technologists will not come within the purview of the C.M.A. approval program. Directors of these courses should apply directly to the C.S.L.T. as training schools. Centralized training programs in hospitals also may be identified by C.S.L.T. as training schools; but in the first instance these hospitals should apply to the C.M.A. for approval for training to the general certificate level.

179. Those technologists who have had specialized training, and who wish to qualify for R.T. Specialty Certificate should apply directly to the Canadian Society of Laboratory Technologists for further information regarding requirements for the specialty certificate.

HISTORY OF THE APPROVAL PROGRAM

180. Twenty-five years ago prescribed courses for medical laboratory technologists were not available. No specific qualifications were required to ensure that students had a reasonable training in basic sciences and laboratory techniques. In the mid-thirties, however, the need was recognized for an agency which would set up uniform standards of training for technologists in Canada, and the Canadian Society of Laboratory Technologists was founded. In those early years The Canadian Medical Association brought together the pathologists and the Canadian Society of Laboratory Technologists for the study of a program of training for hospital laboratories. A C.M.A. Committee on Approval of Training Schools was set up comprising laboratory directors representative of various parts of Canada, and this Committee became the official approving body for hospital laboratories wishing to undertake an in-service program of training for laboratory technologists. A Basis of Approval was drawn up to cover this type of training and has been used throughout the years with little modification until its replacement in 1961 by the current Basis as contained in these pages.

181. The Registry of the Canadian Society of Laboratory Technologists became the official registry of laboratory technologists and recognized the eligibility of students from approved laboratories to qualify for registration by examination. By authority of the Companies Act the Canadian Society of Laboratory Technologists was incorporated under Dominion Charter in May 1937 for the following purposes and objects, namely:

"To improve the qualification and standing of laboratory technicians in Canada; to promote research endeavour in all branches of laboratory work; to promote a recognized and professional status for technicians; to promote closer co-operation between the medical profession and the technician; to more efficiently aid in diagnosing and treating disease".

C.S.L.T. CERTIFICATION PROGRAM

182. Acting under the authority of its charter the C.S.L.T. has established the "R.T." as the standard of qualification for the practice of medical laboratory technology which is recognized across Canada. It has maintained the Register of medical laboratory technologists in Canada and has issued certificates of qualification based on examinations which it has conducted uniformly across Canada; these examinations have been based upon a syllabus prepared by the Society and revised by it from time to time. Until June 1960 the certificates were of two classes—general and specialty; however, in that year the Society, through its newly established Certification Board, made provision for and is granting additional levels of certification, namely, R.T. (Advanced), Licentiate, and Fellow.

183. As laboratory services have continued to grow, the in-service type of training, as carried out in hospital laboratories, has been supplemented by centralized programs of training in universities, departments of public health and larger hospitals where facilities for more formal programs of teaching can be made available. In

these courses such instruction is supplemented by periods of supervised practical training in appropriate laboratories for which the director of the course takes responsibility. To avoid confusion in terminology only training programs of this type are now being referred to as "schools" for training laboratory technologists. C.S.L.T. though its Certification Board and Advisory Council is now setting the predetermined standards which, if adopted by these institutions, will lead to subsequent registration and credits toward higher levels of certification. The director of the school is responsible for evaluation of both the formal and the internship period of training to ensure that C.S.L.T.'s predetermined standards are met if their trainees are to be eligible for C.S.L.T. certification.

ESSENTIAL REQUIREMENTS FOR APPROVAL OF HOSPITAL LABORATORIES

184. A hospital laboratory must have the following minimal requirements to be approved for training medical laboratory technologists.

1. Institution

The laboratory must be located in an adequately organized pathology service associated in a hospital. The hospital should have a minimum bed complement of 200 beds, excluding bassinets, with an occupancy rate of not less than 125 patients and an admission rate of not less than 4,000 per year. Hospitals including those with less than 200 beds and lower occupancy and admission rates may be accepted if they have a volume and variety of services to meet the training required in the C.S.L.T. syllabus, and the following minimum of services or units required:

Total annual units of service: 75,000; histological specimens: 1,000; bacteriology and immunology units: 15,000; bloodbank techniques: 15,000 units; haematology: 20,000 units; clinical chemistry: 20,000 units (excluding urinalysis).

*Moved by Dr. N. N. Levinne,
seconded by Dr. L. O. Bradley,*

that the first sentence of sub-section 1 be amended to read "The laboratory must be located in an adequately organized pathology service associated in a hospital fully accredited by the Canadian Council on Hospital Accreditation."

Carried

If a hospital is unable to provide training in all of the five major areas mentioned above, the students may be affiliated with another laboratory in order to provide students with training in those areas which are deficient. In such instances, the director of the approved hospital laboratory will be responsible for the training carried out in the affiliated laboratory.

2. Staff

The teaching staff of the laboratory must have:

- (a) A medical Director who is:
 - (1) Certified in pathology by The Royal College of Physicians and Surgeons of Canada or who holds equivalent qualifications acceptable to the Committee.
 - (2) In daily attendance at least 50% of the time.
 - (3) Preferably a member in good standing with the C.A.P.
- (b) A senior technologist in charge of training:
 - (1) Who is currently registered with the C.S.L.T. or is eligible for such registration.

- (2) Whose qualifications shall be assessed for this responsibility.

- (c) Other technical personnel responsible for training should be:

- (1) Currently registered with the C.S.L.T. or be eligible for such registration.

- (d) A trainee/R.T. ratio of not more than one trainee to one registered technologist, but preferably one trainee to two R.T.s. No technician-in-training shall at any time be left to work independently without supervision.

3. Space and Equipment

Laboratories providing general instruction to technicians must have adequate modern equipment in all fields of laboratory work they are undertaking. There should be an ample variety of teaching specimens (e.g. haematology, parasitology, and mycology). These will be appraised by the surveyor. The facilities of the laboratory shall be sufficient for training in addition to the requirements for adequate service to the patients.

4. Records

Records of two types shall be kept and be available to the committee upon request:

- (a) Personal records of trainees.
- (b) Records of instruction.

Personal records of trainees should include:

- (1) An application form.
- (2) A record of educational background, including official transcripts of marks obtained.
- (3) A daily record of procedures performed (log book).
- (4) Records containing observations respecting accuracy, neatness, habits, scientific interest and other estimations of the personal characteristics of the trainee.
- (5) Records of proficiency.
- (6) Results of periodic examination in each phase of training.

Teaching records should include:

- (1) Course content, time allotment, and rotation plan.
- (2) Lectures presented with name of lecturer and topic.
- (3) Teaching aids and diagrams used.

In addition to the above, well organized departmental records of practical training should be available.

5. Library

Up-to-date references, texts and scientific periodicals pertaining to laboratory techniques shall be kept readily accessible to trainees.

METHOD OF APPROVAL

185. 1. Application forms for approval of hospital training laboratories may be obtained by writing the General Secretary, The Canadian Medical Association, 150 St. George Street, Toronto 5, Ontario.

186. 2. When completed, the forms are to be returned to the General Secretary, for submission to the Committee on Approval of Schools for Laboratory Technologists.

187. 3. Inspection: where possible, the Committee will ask a qualified pathologist to inspect facilities, the proposed curriculum, and the qualifications of instructors provided by the laboratory. He will submit a report to the Committee which will supplement the application received from the director of the laboratory.

188. 4. The Committee will meet periodically, as required, to review applications, but between meetings the completed applications will be sent by mail to Committee members for their consideration.

189. 5. Laboratories will be granted "full approval" or "provisional approval" or may be given a "not approved" rating according to the recommendations of the Committee. "Full approval" will apply for a period of four years and "provisional approval" for one or two years. Those laboratories that are "not approved" may apply again after a six months' interval if they have corrected their deficiencies.

190. A "fully approved" laboratory is one which meets the essential requirements in the foregoing pages of this Basis and which is considered by the Committee to be a satisfactory hospital in regard to organization, facilities, volume and variety of services, teaching personnel, and training program for laboratory technologists.

191. A "provisionally approved" laboratory means that the laboratory has barely met the essential requirements. One or more essential requirements are on the borderline, and as well there are other desirable aspects of the training program that are deficient. With this rating the Committee believes the laboratory should reach the approved status within a short period of time (one or two years), and recognizes that some hospitals which have this rating may have some excellent features which are comparable with the best approved laboratories.

192. A "non-approved" rating indicates that the laboratory in question is not eligible for approval because of insufficient volume and variety of services, lack of qualified teaching staff, inadequate facilities, or is lacking in organization or unable to carry out the training course prescribed by the Committee.

193. 6. The applicant will be notified of the action taken by the Committee, and any deficiencies in the program will be pointed out.

194. 7. The basis for continuing approval shall be maintenance of the above standards, which may be assessed by:

- (a) Examination results during training and for registration.
- (b) Periodic re-inspection, as deemed advisable.
- (c) A continuing active training program not interrupted for more than two consecutive years.

EDUCATIONAL REQUIREMENTS

195. Appended to this brochure is an outline of rules and regulations governing registration which includes admission requirements for training in laboratory technology. These include educational requirements for admission to an approved course of training.

196. Laboratory directors are urged to check the educational standing of students with C.S.L.T. before students embark on a training program. This enrolling with C.S.L.T. will ensure that their basic education is approved and will lead to recognized standing as a Registered Technologist.

197. Further details governing requirements for registration may be obtained from the Registrar, Canadian Society of Laboratory Technologists, 61 Victoria Avenue North, Hamilton, Ontario.

THE TRAINING PROGRAM

198. The training course should be organized to provide the student the maximum opportunity to:

- (1) Learn fundamental facts about all procedures outlined in the syllabus for General Certificate, C.S.L.T.
- (2) Become proficient in the use and care of all laboratory equipment and apparatus.
- (3) Acquire the technical ability to work speedily and accurately (when under pressure).
- (4) Acquire the philosophy of medical practice and patient care.

199. The first three to six months should be considered a probationary period, during which time examinations and a personal assessment should be conducted to determine the trainees' personal suitability and whether or not they should be permitted to continue in training.

200. A dedicated medical and technical staff with an interest in teaching is most important for the success of the training program. Laboratories should not enrol more students than can be comfortably trained by the medical and technical staff. Emphasis should be placed on the quality of training rather than on quantity. Programs based on the securing of cheap technical assistance cannot do justice to the teaching program.

201. The C.M.A.'s Committee on Approval of Hospital Laboratories pertains only to general training, leading to the General Certificate. The minimum course of training is 14 months, and preferably 18 months, covering the C.S.L.T. syllabus, a copy of which is attached.

202. The essentials of training include a prescribed number of lecture hours and/or demonstrations in the following subjects:

General Orientation	Including ethics, hospital administration, public relations, principles of patient care, importance of infection and lab. hazards, etc.
Chemistry	45 hours
Haematology	30 hours
Bacteriology & Immunology	30 hours
Histology	10 hours
Physiology	15 hours
Instrumentation	General knowledge of the principles applied to laboratory apparatus.

203. It is recognized that wherever there are small numbers of students, a didactic lecture course is not practical. However, the Committee requires that the same subject content be covered in discussions with the students if a formal lecture course is not carried out.

204. The training should include practical instruction and bench experience which should be incorporated in the discussion between student and teacher, ensuring that all aspects of the subject are understood and that students receive a thorough grounding in principles and techniques. Examinations in each subject should be held regularly throughout the training period.

205. The director of the laboratory is responsible for both the theoretical and practical training of students, and the conducting of periodic examinations. He should ensure that the C.S.L.T. syllabus is adequately covered, and that his trainees are eligible for the C.S.L.T. examination leading to certification.

THE LABORATORIES' OBLIGATIONS TO STUDENTS

206. Laboratories approved for training of technologists should not allow trainees to serve in the laboratory as substitutes for salaried qualified workers in return for obtaining training and experience in laboratory technique.

207. Trainees should be eligible for hospital staff benefits accorded members of the staff, including medical and surgical treatment where applicable. They should, also, be subject to the same requirements for health examination as other members of the laboratory staff.

208. As trainees will not be aware of the dangers involved in the handling of hazardous materials, special precaution should be taken to ensure the safety of the student at all times.

209. Adequate vacation time should be allocated during each twelve (or more) months period of training. Time lost through illness in excess of one week per year should be made up at the end of the course.

CHANGE OF PERSONNEL AND FACILITIES

210. Any changes in personnel and facilities which may affect the teaching program should be reported to the C.M.A. These would include such items as: a change of director or the senior technologist in charge of training; an increase in the number of students or student/R.T. ratio; or new facilities.

N.B.: The Committee reserves the right to approve laboratories which in its opinion give instruction equivalent to the curriculum, and conversely, to disapprove those laboratories which have not a good record of performance even though the questions on the application form appear to be answered correctly.

REPORT OF THE COMMITTEE
ON MATERNAL WELFARE

Mr. Chairman and Members of the General Council:

211. The report of your Committee on Maternal Welfare is presented this year in an unusual form because our principal activity and consuming interest was related to the National Conference on Maternal Welfare.

212. The Conference was an outstanding success and it permitted for the first time the assembly of the Chairman of Divisional committees of like name and function in the interests of safer childbirth.

213. Presented herewith in the form of the Minutes of the Conference and two appendices are the record of professional activity from coast to coast, certain recommendations for adoption by The Canadian Medical Association, a number of definitions and a classification of the causes of maternal deaths and a suggested reporting form designed to promote desirable uniformity in our investigation of maternal deaths.

214. Your Committee is grateful to The Association for underwriting the cost of the Conference on Maternal Welfare and it is our hope that the outcome will be of the greatest assistance to those official and voluntary agencies which are working harmoniously in the common cause of maternal welfare.

All of which is respectfully submitted.

THOMAS PRIMROSE,
Chairman.

*Moved by Dr. T. Primrose,
seconded by Dr. R. M. Parsons,*

*that the Report of the Committee on Maternal Welfare
be adopted.*

Carried

MINUTES OF
NATIONAL CONFERENCE,
COMMITTEE ON MATERNAL
WELFARE

215. The first National Conference of the Committee on Maternal Welfare of The Canadian Medical Association was held December 9 and 10, 1960, in Conference Room No. 4 of the Royal Victoria Hospital, Montreal. The following delegates were present:

Nucleus Committee:	Dr. Thomas Primrose, Montreal, Chairman
	Dr. George Strean, Montreal
	Dr. Ted Tweedie, Montreal
	Dr. P. Roberts, Montreal
	Dr. G. Bélanger, Montreal
	Dr. M. Bérard, Montreal
Newfoundland:	Dr. George Flight, St. John's
P.E.I.:	Dr. J. K. L. Irwin, Charlottetown
Nova Scotia:	Dr. P. M. Sigsworth, Halifax
New Brunswick:	Dr. T. A. Foster, Saint John
Ontario:	Dr. Douglas Dalziel, Toronto
Manitoba:	Dr. A. C. McInnis, Winnipeg
Saskatchewan:	Dr. R. H. MacPherson, Saskatoon
Alberta:	Dr. Douglas Ritchie, Edmonton
British Columbia:	Dr. John Dickinson, Vancouver
By Invitation:	Dr. H. H. Oxorn, Chairman Maternal Death Study Committee, Montreal Obstetrical & Gynaecological Society

Recording Secretary: Mrs. Nancy Gaunt, Quebec Division
C.M.A.

216. The meeting was called to order at 9.40 a.m. by the chairman, Dr. Primrose, who welcomed and introduced the delegates.

AIMS AND OBJECTS

217. Dr. Primrose outlined the purpose served by the Committee on Maternal Welfare as "helping the women of Canada to have bigger and better babies and not to lose their lives doing it". Each provincial committee operates autonomously, but submits a report to the central chairman annually which he in turn incorporates into the national committee's report and presents, together with recommendations, to General Council at the Annual Meeting. At the present time, the Divisional committees are working in cooperation with various government agencies mainly as fact-finding groups. Statistics to date (which, because of special difficulties encountered in some provinces, may or may not be accurate) show that Newfoundland has the highest maternal death rate, followed closely by Quebec, and the Prairie provinces the lowest.

218. It was hoped that, out of this Conference, the Committee could set up their own standards and definitions which would be acceptable right across Canada for their work.

219. Dr. Dickinson also commented that any recommendations made by the Committee might carry extra weight if they were directed through an appropriate agency (e.g., the Red Cross in the case of blood supplies).

TERMINOLOGY AND DEFINITIONS

220. Terminology and definitions in maternal deaths studies, accepted at the Annual Meeting of The Canadian Medical Association three years ago as a guide for the Committee, were discussed in detail.

221. It was moved by Dr. Irwin, seconded by Dr. Ritchie, that Section I be adopted as amended. Carried.

It was moved by Dr. Dickinson, seconded by Dr. Bérard, that Section II be adopted as amended. Carried.

222. After further changes to Section IV—B, it was moved by Dr. Ritchie, seconded by Dr. Dalziel, that terminology and definitions be adopted as amended. Carried. They appear, as accepted, as Appendix I to these Minutes.

STANDARDIZED FORM FOR RECORDING MATERNAL DEATHS

223. Several suggestions were made for improving the Case Report Form, including a separate sheet for identification, addition of a facsimile of the autopsy report or post-mortem report signed by the pathologist, and a separate sheet for biochemical work. The importance of the final page was stressed before the form was adopted as amended.

224. The necessity of working through an independent investigator and not sending the form to the physician concerned for completion was emphasized, as well as the retention of good men on the Committee for several years for the sake of continuity.

225. Dr. Foster also suggested a union of Maternal Welfare Committees in the Maritime Provinces for the study of case reports, since individually each one would have few cases in the course of a year.

METHODS OF FACT FINDING IN EACH PROVINCE

226. QUEBEC: Dr. Primrose reported that data for this Province is collected from two sources—the hospitals of Montreal and the certificates of obstetrical deaths sent to him once every two months by the provincial demographer. Of these, only the English hospitals of Montreal supply accurate information, each death which might be maternal being worked up by a staff member and reviewed annually by the Montreal Obstetrical and Gynaecological Society. The French hospitals are gradually beginning to cooperate, and relations with the government improving, although the Minister of Health still considers it impracticable to review all death certificates. A five-unit organization with field workers has been set up throughout the Province, but the time is not yet ripe to call upon it for action. The Committee operates without the aid of government or other funds.

227. BRITISH COLUMBIA: In this Province the government is so cooperative the doctors are suspicious, Dr. Dickinson reported. Their program started in 1951, with adoption of a live and stillbirth notification form to be sent to the district registrar within 48 hours. A year or two later, an obstetrical discharge summary was devised, in such form as information could readily be trans-

ferred to an IBM card, and this continues to gain ever wider acceptance in B.C. hospitals. Operating on a grant from the University of British Columbia, the Federal Department of Health, and B.C. Division of the C.M.A., the Committee employs a single investigator to look into every death. On notification of the death, which is sent to them promptly by the government and includes the death certificate and frequently an autopsy report, the doctor concerned is sent a letter requesting a summary and the Committee has experienced a very favourable response to this. An attempt is made to follow this up with investigation of hospital, nursing and medical records within the next couple of months, after which a report is compiled and presented to the Committee, the carbon copy going to the hospital concerned and the flimsy to the Department of Vital Statistics. The Committee operates without legal authority.

Recommended and approved that the words "In this province the Government is so cooperative the doctors are suspicious" be deleted, and the first sentence of Section (227) should now read "Dr. Dickinson reported that their program started in 1951 . . ."

228. ALBERTA: Because of the wide area covered by the Province, the Alberta Committee depends on the cooperation of the Department of Vital Statistics for notification of maternal deaths, Dr. Ritchie stated. Nevertheless it is felt that many are being missed. The Maternal Mortality Committee has been active since 1930, and is looked upon with favour by the profession, to the extent that many doctors will write themselves to report a death. When the chairman of the Committee has been notified, a letter is sent to the physician in question and 90% of them cooperate by supplying details of the case. One meeting of the Committee is held per year for the study of reports and whereas in the past it was composed entirely of obstetricians, it has been expanded now to include internists and pathologists. The Committee operates without funds and it is felt that they should seek a government grant and send out their own investigator—a move which would, they believe, considerably improve the accuracy of their reporting.

229. SASKATCHEWAN: The Committee in this Province is fortunate in having at its service an obstetrician employed by the Department of Public Health, Dr. MacPherson noted. Paid with funds from federal and provincial grants, he works sixty days each year for the Committee, including travelling for investigation, and because he is a government official, his records cannot be subpoenaed. The Committee also enjoys the cooperation of the Department of Vital Statistics and is permitted to cross-index the death certificate of all women between the ages of 14 and 50 with birth certificates. When a death occurs, a form letter is sent the physician asking for permission to review the case, and cooperation is invariably received. The investigator completes a report form on which the separate identification sheet is removed, and hospital charts are also made available. The Committee meets four times a year to review the anonymous cases. Composed of two obstetricians, two pediatricians and two general practitioners, a vote is registered when opinion is not unanimous. A report is then made to the doctor and avoidable factors explained. Where previously 50 to 60% of cases studied were preventable, this year these number 20% or less. The importance of bringing patients developing complications to larger centres by air ambulance is stressed, and has resulted in considerable improvement.

230. MANITOBA: The Committee here has suffered because of a high turnover of chairmen, Dr. McInnis felt, and he advocated continuity for best effect. Their information begins with receipt of the death certificate, and a maternal mortality inquiry report (outdated and in need of revision) is then sent out by the Department of Vital Statistics. The reply and autopsy report, if one has been done, is forwarded to the chairman, who presents it in summary to the Committee. Fourteen to twenty deaths a year are thus reviewed, but no follow-up is being done at present. No funds have been made available to date, but the appointment of a pathologist to act as investigator is under consideration. Manitoba's main problem is the time elapsing between a death and notification of same; much more could be done if it were mandatory that death due to pregnancy be reported within three days.

231. ONTARIO: Dr. Dalziel outlined the development of the Maternal Welfare Committee's work from a pilot study in Toronto in 1951 to its present state of seven active groups throughout the Province. Deaths are reported on forms supplied by the Department of Health and the Hospital Services Commission, and copies sent to Dr. Dalziel who, together with other committee chairmen, enjoys legal status as consultant to the Department of Health by Order-in-Council. They are then divided into areas and three letters dispatched—one to the doctor, one to the hospital superintendent, and the third, with photostats of the forms and two copies of the questionnaire, to the reviewing officer. This man is paid \$50 per day per case or his expenses, whichever is the smaller, by the O.M.A., and his travelling expenses assumed by the Department of Health. Once the case is completed, it is submitted anonymously to the local committee, where it is studied by a small group of four or five members before being reviewed at a meeting and a decision reached. The Chairman prepares a one-page summary of each case, which is mimeographed and distributed to every Committee member in Ontario, the Department of Health, and the Hospital Services Commission. To ensure anonymity, photostats are destroyed by the Department of Health and the questionnaire kept by the Chairman is filed by number only. In addition to local meetings, all committee chairmen meet twice a year with a representative of the O.M.A. and the Department of Health to present a concerted picture and set policy. Information is tabulated and individual reports completed for the November meeting, the final report being ready for presentation the following spring. There are now fewer overall deaths in Ontario, but still 50 to 60% of these are preventable. The Committee's experience has been that doctors are notifying their local committee of deaths right away; the review officer is often met by a delegation to discuss problems in their area; there has been a great upswing in consultations, the cooperation of doctors is excellent; no legal problems have been encountered as yet; and no adverse effects noted from publicizing their activities.

232. NEW BRUNSWICK: When Dr. Foster was appointed Chairman of the New Brunswick Committee, he found that little had been done in the past and no information or records were available to him. He finally succeeded in obtaining from the Department of Health a record of direct maternal deaths, which number three to five a year, sent out five letters requesting permission to study them. The total lack of interest resulting moved him to submit his resignation, but changes were adopted and he was persuaded to continue his work. Proposed for the future are receipt weekly of copies of all death certi-

cates; the sending out of forms to the doctors concerned in maternal deaths; the use of an investigator whose expenses will be paid by the Department of Health; and meetings to discuss the deaths. Dr. Foster was advised that if he can get the profession behind him, he will receive the cooperation of the government.

233. NOVA SCOTIA: Most of the work of this Committee, which is financed by the N.S. Medical Society through a government grant, is in the field of perinatal mortality rather than maternal. At the onset, physicians of the Province were circularized by the N.S. Medical Society, requesting their cooperation. Deaths are reviewed by an investigator, who includes in his study an inspection of hospital records and an interview with the case room supervisor, and brought to the attention of the Committee every two weeks, where an opinion is given and classification made on an anonymous basis. IBM cards will soon be used for classifying cases. The Committee is composed of two obstetricians, two pediatricians, two or three general practitioners who are rotated, an anaesthetist, and a representative of the Department of Health. Dr. Sigsworth also commented on how well the emergency obstetrical team was being received.

234. PRINCE EDWARD ISLAND: With only 90 doctors in the province, over 40% of whom are specialists, the main accomplishment in P.E.I. has been limiting the work of general practitioners in hospital obstetrical departments by making consultation compulsory, Dr. Irwin reported. He favoured a closer liaison with the Department of Vital Statistics and echoes Dr. Foster's suggestion of a union of Maritime Province committees.

Dr. C. A. Coady stated that this was inaccurate in that consultations are not held on all obstetrical cases but only on cases of complicated pregnancy.

*Moved by Dr. C. A. Coady,
seconded by Dr. L. E. Prowse,*

that Section 234 be amended to read: "With only 90 doctors in the province, over 40% of whom are specialists, the main accomplishment in P.E.I. has been the implementation by the general hospitals, through their by-laws or regulations, which make consultation compulsory in all complications of pregnancy or labour..."

Carried

235. NEWFOUNDLAND: Officially, nothing has been done as yet in Newfoundland, Dr. Flight reported. The government is almost overly anxious that studies be made and is pushing the Committee to begin.

236. The meeting adjourned for the day at 5 p.m., and was followed by a dinner at the Faculty Club, 3450 McTavish Street.

237. On Saturday, December 10, the meeting was again called to order at 9.40 a.m. by the Chairman, Dr. Primrose, who then commented on a number of publications members might find interesting, including a Report on Confidential Enquiries into Maternal Deaths in England and Wales, 1955-57; a Guide for the Study of Perinatal Mortality and Morbidity; and the Report of the Obstetrical Department at Bellevue Hospital in New York.

5. Legal Implications of Committee Work

238. Dr. MacPherson reported that the main problem encountered is the fear that information could be subpoenaed and the physician censured. They have consulted the Attorney General's office and been advised that, with only one man cognizant of the facts he is, by virtue

of being an employee of the Crown and protected by the Minister of Health, unable to be brought before the courts. Saskatchewan has a double system for identifying the code number of a case, kept in two separate places under lock and key for security.

239. Dr. Dalziel commented that Ontario too has consulted a lawyer and the Attorney General and been advised that any evidence could only be considered hearsay under the circumstances. The reviewing officer would be the only person who could be subpoenaed for an opinion, and then only as an expert witness; opinion of the Committee is not admissible. As far as the Committee is concerned, all identification is destroyed, the name particulars and death certificate being kept under lock and key by the Department of Health. Tissue records should be destroyed, or kept with number only. Ontario has no precedent of a court action as a result of their investigations, but action by the Committee is postponed where legal action is pending. The main problem, Dr. Dalziel felt, is to convince the doctors of the Province that no harm will come to them by cooperating with the Committee.

240. Dr. Primrose noted that in a civil action for damages, no action is admissible unless witnesses are available for cross-questioning. He counselled that doctors should guard against giving information to a lawyer and should wait to be subpoenaed; in this way, it is not known beforehand what evidence will be given.

6. Recommendations

241. It was moved by Dr. Dalziel, seconded by Dr. MacPherson, that a summary report be filed with the central committee chairman by each province by the first week in March, outlining the previous year's activities and that in the latter part of November or the beginning of December every year, the provincial chairmen meet with the Nucleus Committee for discussion of the previous year's statistics and any other pertinent business. Carried unanimously.

242. Dr. Primrose commented that the report of this meeting, as amended, will form next June's annual report. The Committee proposes to make up a book, incorporating terminology, case report forms, and forms used at present in the various provinces, for the guidance of each Divisional group. Members were therefore requested to forward to the central Chairman all pertinent data in order that this project may be completed as soon as possible.

243. It was further agreed that if any province has a case on which the final summary is questioned, it should be forwarded to the central Chairman who will then send it to each of the other provincial chairmen for opinion. The central Committee, after it has reviewed these findings and opinions, will submit a final decision to the province who first requested it.

244. Members also expressed an interest in reviewing the summary sheets of the Ontario Committee, and Dr. Dalziel agreed to forward to them reports of all 1959 cases and, if possible, 1958 ones as well.

7. Further Definitions

245. It was moved by Dr. Dickinson, seconded by Dr. Dalziel, that a live birth be defined as any foetus issuing from its mother weighing over 500 grams and showing any one of the following manifestations: (a) movement of a voluntary muscle; (b) respiratory effort; or (c) heart beat. Carried.

246. Conversely, a stillbirth would be defined as any foetus weighing above 500 grams showing no evidence of the above.

*Moved by Dr. J. W. Dales,
seconded by Dr. T. Primrose,*

that sections 245 and 246 be accepted for information only.

Carried

247. This resolution, if ratified by the C.M.A. General Council in June, would then be submitted to the government bodies concerned for their opinion and action.

Recommended by Dr. Primrose that this be amended to read "This resolution, if ratified by the C.M.A. General Council in June, would then be submitted to the government bodies concerned and any other sub-committee of the C.M.A. for their opinion and action."

8. Abortion

248. A review of the incidence and methods of induced abortion in the various provinces was undertaken, and it was agreed that it was impossible to know the exact number performed although morbidity ran high and mortality from this cause varied from 10 to 20% of maternal deaths. Under the circumstances the only recommendation that could be made was that if any good methods of treating the complications of abortion were discovered, they should be disseminated throughout the profession in order to save as many lives as possible.

9. Thanks and Adjournment

249. Dr. Dalziel, on behalf of the members present, congratulated Dr. Primrose on a most successful and informative meeting, and Dr. Dickinson's motion of thanks for the wonderful dinner the previous evening, seconded by Dr. Irwin, was carried unanimously. Dr. Strean also took the occasion to thank those present for their attendance at the meeting, which then adjourned at 12.10 p.m.

APPENDIX I

TERMINOLOGY AND DEFINITIONS IN MATERNAL DEATHS STUDIES

250. The collection and tabulation of information and data in an orderly manner is necessary in any study. Then to compare and analyze the results of the various studies require that such information and data be concerned with like things or characteristics. As a result the first step in preparing a "guide" is the development of terminology and definitions. The following are in no sense absolute, but they do represent an agreed upon compromise in the thinking of those who participate in this project. It is suggested that committees conducting such studies utilize these terms and definitions for a trial period of three years and report their experiences to the Maternal Welfare Committee.

251. I. Maternal Death: The death of any woman dying of any cause whatsoever while pregnant or within 90 days of the termination of the pregnancy, irrespective of the duration of the pregnancy at the time of the termination or the method by which it was terminated. Deaths from chorio-epithelioma or other direct obstetrical causes occurring after the 90-day period should not be excluded from this classification, but rather reported separately.

(Note: The term "maternal death" as here defined to be used by maternal mortality study committees indicating the scope of their studies, should not be confused with the official provincial and national "maternal mortality" statistics which include only those deaths with International Classification Causes numbering 640-689).

- 252. A. Direct Obstetric Cause of Death:** A death resulting from complications of the pregnancy itself, from intervention elected or required by the pregnancy, or resulting from the chain of events initiated by the complication or the intervention. These deaths include those causes listed in Chapter XL of the International Statistical Classification of Diseases, Injuries, and Causes of Death, Sixth Revision Code Nos. 640-689, and other causes consistent with this definition. (See section on "classification of Maternal Deaths.")
- 253. B. Indirect Obstetric Cause of Death:** A death resulting from disease before or developing during pregnancy (not a direct effect of the pregnancy) which was obviously aggravated by the physiological effects of the pregnancy and caused the death. (See section on "Classification of Maternal Deaths.")
- 254. C. Non-Related Cause of Death:** A death occurring during pregnancy or within 90 days of its termination from causes not related to the pregnancy, nor to its complications or management. (See section on "Classification of Maternal Deaths.")
- 255. II. Obstetric (Commonly referred to as Maternal) Death Rate:** The number of maternal deaths due to direct and indirect obstetric causes (as defined in Sections 1A and 1B above) per one thousand live births. (If in doubt about classification of a particular diagnosis, a summary of the case is to be forwarded to the national Chairman, who will then seek a composite opinion from Divisional committees.)
- 256. III. Factors of Preventability (Avoidability):** Preventability should be judged in an ideal academic sense. This concept involves three assumptions. First, the physician possessed all the knowledge currently available relating to the factors involved in the death. Second, by experience, he had reached a high level of technical ability. Third, he had available to him all the facilities present in a well-organized and properly equipped hospital. Because of the austerity of these criteria, it is more desirable to determine avoidable factors involved in the death, rather than to label the death as preventable. This allows more specific discussion resulting in better maternal care and reduction of obstetric causes of death.
- 257. IV. Factors of Responsibility:** Responsibility should be determined whenever possible and assigned as appropriate to the attending physician, consultant, midwife, hospital, patient, or any combination. (See Appendix for cases exemplifying the various factors as defined in the following five categories.)
- 258. A. Professional Factors:** These are concerned with cases where there appear to be shortcomings in diagnosis, judgment, management, and technique, and include failure to recognize the complication or evaluate it properly. They also include instances of injudicious haste, delay or timing of operative intervention, and failure to utilize currently

acceptable methods of treatment. Finally, they would include services which were technically inept, and those failures which could have been averted by proper and timely consultation.

- 259. B. Hospital Factors:** These are concerned with facilities, equipment or personnel which are inadequate. In terms of modern obstetrics, the hazards of delivery cannot be met successfully unless the hospital provides, among other things, (1) a separate, well-directed maternity section; (2) a complete blood service; (3) adequate twenty-four hour anaesthesia facilities; (4) suitable x-ray facilities; (5) adequate twenty-four hour laboratory facilities; and (6) adequate twenty-four hour operating facilities.
- 260. C. Patient Factors:** These should be recognized, but never as an excuse for professional inadequacy. They are concerned with death resulting from a complication for which there is generally successful treatment but which the patient denied herself by delaying her initial visit to the physician, by delaying obtaining medical care after the symptoms were obvious at a layman's level, or finally, by not following the advice and instructions of her physician.

CLASSIFICATION OF MATERNAL DEATHS

I. Direct Obstetric Causes.

- 261.** Included are those listed in Chapter XI, "Deliveries and Complications of Pregnancy, Childbirth, and the Puerperium." Code Numbers 640-689, of the International Classification of Diseases, Injuries, and Causes of Death, Sixth Revision, plus other causes not listed in Chapter XI but belonging to this Classification. The following main headings are recommended: (See Appendix for list of three-digit Categories, and see the Manual, Sixth Revision, for four-digit subcategories.)
- A. Haemorrhage
 - B. Toxaemia
 - C. Infection
 - D. Vascular Accidents (such as Air Embolism, Amniotic Fluid Embolism)
 - E. Anaesthesia
 - F. Other (such as Molar Pregnancy and Transfusions Hemolysis)
 - G. Undetermined (A necessary category which should be reduced as much as possible, especially through the use of adequate records and Autopsies.)

II. Indirect Obstetric Causes.

- 262. A. Cardiac Disease**
- B. Vascular Disease (such as Hypertensive Vascular Disease and Vascular Embolism)
 - C. Reproductive Tract Disease (such as Uterine and Adnexal Tumors)
 - D. Urinary Tract Disease
 - E. Hepatic Disease
 - F. Pulmonary Disease
 - G. Metabolic Disease (such as Diabetes)
 - H. Other (such as Appendicitis and Peritonitis of non-puerperal origin)
 - I. Undetermined (A necessary category which

should be reduced as much as possible, especially through the use of adequate records and Autopsies.)

III. Non-Related Causes.

263. A. Communicable and Infectious Disease
- B. Blood Dyscrasias
- C. Malignancy

- D. Suicide
- E. Murder
- F. Accidental
- G. Other
- H. Undetermined (A necessary category which should be reduced as much as possible especially through the use of adequate records and Autopsies.)

CANADIAN MEDICAL ASSOCIATION MATERNAL MORTALITY STUDY

CASE No.....

Comments of the Maternal Welfare Committee

SECTION A—IDENTIFICATION

Age:	M.S.W.D.	Date of Death.....
Death Certificate Diagnosis		Time of Death.....A.M. P.M.
Pathological Diagnosis		Autopsy Yes No
1.		6.
2.		7.
3.		8.
4.		9.
5.		10.

SECTION B—DEATH AND DELIVERY DATA

I. Term of gestation at time of death..... wks.
 Death occurred before, during, and after delivery or abortion.

II. (a) From-To

Admissions to hospital..... Before, during, after del. or abort.

..... " " " "

..... " " " "

(b)

Place of delivery..... Attended by: Phys. Nurse Other

(c)

Place of Death..... Attended by: Phys. Nurse Other

III. Relevant past medical and surgical history

IV. Previous Obstetrical History

V. Prenatal Care

DLNMP: EDC:

Private Physician Public Clinic

Gestation when first seen..... wks. Total No. of visits.....

Co-operation of Patient:

Records of relevant facts regarding:

Wt:

B/P:

Urine:

HGB:

Abnormalities noted at prenatal exam. (Heart Disease, Nephrosis, Diabetes, Pelvic abnormalities, etc.)

Prenatal Complications: (Pernicious vomiting, Pre-eclampsia, serious illness, etc.)

VI. Labour

Gestation..... wks. at delivery

Labour commenced: Date..... Time..... Spont. Induced

Rupture of membranes: Date..... Time..... Spont. Induced

If labour induced—why

how

Presentation:

Drugs used during labour (List dosage, time of administration)

Examinations during labour:

VII. Delivery

Type: Date..... Hour.....

Spontaneous

Operative with indications (forceps, caesarean section, etc.)

Drugs used:

Anaesthesia:

Type:

Administered by:

Relevant Details:

- VIII. Third Stage
Placenta: Spontaneous
Operative
Laceration or episiotomy and repair
Estimate amount of blood loss.....c.c.s.
Medications used: (Oxytocic, analgesia, or I.V. infusion.)
- IX. Consultation:
Status, when, why and opinion given:
- X. Post Partum Complications:

SECTION C—FOETUS

- Delivered Yes..... No..... Gestation time.....wks.
Livebirth Wt..... Morbidity Yes, No.....days
Neonatal death Yes, No.....days
Stillbirth Wt..... Macerated Yes, No.....
Death before labour.....
Death during labour.....
- Congenital abnormalities
Asphyxia Yes Resuscitation method
No
Autopsy Yes No
Pathological diagnosis
1.
2.
3.
4.
5.
6.

SECTION D

- Review Officer's Summary: Comments:
Date..... Signature.....

SECTION E—SUMMARY AND CLASSIFICATION BY LOCAL COMMITTEE

(Refer to pages 11, 12 and 13 Maternal Death Studies, A.M.A. 1957)

1. *Direct Obstetrical Death* (underline Section applicable)
A. Haemorrhage
B. Toxaemia
C. Infection Classification.....
D. Vascular Accidents (Embolism)
E. Anaesthesia Int. Class No.....
F. Others (Molar pregnancy, transfusion, etc.)
G. Undetermined
2. *Indirect Obstetrical Death* (underline Section applicable)
A. Cardiac
B. Vascular (Hypertensive accident and Embolism)
C. Reproductive tract disease Classification.....
(Uterine or adnexal tumors)
D. Urinary tract
E. Hepatic
F. Pulmonary Int. Class No.....
G. Metabolic (Diabetes)
H. Others (Appendicitis)
I. Undetermined
3. *Non-Related*
Cause of Death:
4. *Not a Maternal Death*
- II. *Preventable*
Non-Preventable
Factors of Responsibility (Underline factors applicable)
A. Professional
B. Hospital
C. Patient
D. Undetermined

Consultive comments on factors of responsibility or preventability:

- Date..... Local Chairman.....

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION

Mr. Chairman and Members of the General Council:

264. Your Committee again considered the problem of undergraduate medical education in the light of the effects brought about by hospital insurance.

265. In the development of medical education in this country, the system of "graded responsibility for patient care under supervision" has come to be the accepted pattern of teaching in the clinical years and can now be regarded as essential to the operation of a teaching hospital. Such teaching has usually been provided in teaching units whose patient population was composed of the indigent sick, who received their medical care without charge, and in return, expected to be examined by undergraduate students, interns and residents. It is evident that the numbers of such indigent patients is rapidly decreasing.

266. Free choice of doctor by patient has long been held a requisite for good medical practice and is a principle which has been upheld by The Canadian Medical Association. It is, thus, conceivable that the supply of patients for teaching units could decline unless some means of replacing the indigent as the main source of teaching patient is found.

267. Private patients have been used for teaching in great or lesser degree in most parts of the country. The value of such teaching has varied depending upon the organization of the hospital concerned. Some clinicians have emphasized certain difficulties in using private patients for teaching. They point out the reluctance of many private patients to be used for teaching, the difficulties inherent in one clinician discussing another's patient, and the difficulty in delegating responsibility for the private patients' investigation and treatment to the resident-intern-clinical clerk team. On the other hand, those physicians who have had the most experience with teaching with private patients feel that it can be quite as effective as with public ward patients. Finally, the steady increase in prepaid medical care schemes and the possibility of increasing provision of medical care by Government make it likely that the numbers of public ward patients, as presently known, will progressively decrease.

268. To continue the system of graded responsibility for patient care under supervision, four factors are essential:

1. A sufficient number of qualified clinical teachers both full-time and part-time.
2. An adequate number of residents at various stages of training.
3. An adequate supply of "teaching patients".
4. Sufficient beds in teaching units to meet the requirements of medical education in the teaching hospitals of the country.

269. With these considerations in mind and in an effort to insure the continuation of the system of graded responsibility for patient care under supervision as the method of teaching in the clinical subjects in hospitals providing undergraduate medical education, your Committee recommends:

- I. That the following definitions be adopted by The Canadian Medical Association:
 - (a) A teaching unit is a hospital or a group of beds in a designated area of a hospital in which the care

of the patient is the function of the team of staff physician-resident-intern-clinical clerk. The medical staff of such a teaching unit is to be appointed jointly by university and hospital and organized as departments, the heads of which are similarly jointly appointed by university and hospital.

- (b) A teaching patient is one who enters a teaching unit, but patients in other parts of a hospital with a teaching unit may be used for teaching with the consent of the patient and attending physician.

II. That The Canadian Medical Association indicate to the Association of Canadian Medical Colleges their view that such teaching units should constitute a part of all undergraduate teaching hospitals.

III. The Canadian Medical Association cooperate with the Association of Canadian Medical Colleges and any other interested bodies in any approach to Government which may become necessary to insure the preservation of the high quality of medical education in Canada, specifically that submission be made in this regard to the Royal Commission on Health Services.

270. Finally, the Committee notes with satisfaction the recognition by the Federal Government of the growing scope and importance of medical research in Canada as indicated by the formation of the Medical Research Council to replace the former Medical Division of the National Research Council.

All of which is respectfully submitted.

R. C. DICKSON,
Chairman.

Personnel of the Committee:
Nucleus:

Dr. C. B. Stewart, Halifax
Dr. R. O. Jones, Halifax
Dr. Ian Mackenzie, Halifax
Dr. C. W. R. Tupper, Halifax
Dr. F. M. Fraser, Halifax

Divisional Representatives:

Dr. A. F. Hardyment, Vancouver
Dr. H. E. Duggan, Edmonton
Dr. J. F. C. Anderson, Saskatoon
Dr. D. P. Snidal, Winnipeg
Dr. M. F. Clarkson, Peterborough
Dr. D. G. Cameron, Montreal
Dr. R. A. MacIntosh, Fredericton
Dr. C. B. Stewart, Halifax
Dr. H. W. Moyse, Summerside
Dr. Ian Rusted, St. John's

Dr. Dickson commented that the definition of "teaching unit" as set forth in this report has been accepted by the Association of Canadian Medical Colleges and the Royal College of Physicians and Surgeons. This will mean that those bodies concerned with medical education will speak with one voice in the important days which lie ahead for the medical profession.

*Moved by Dr. R. C. Dickson,
seconded by Dr. R. M. Parsons,*

that the Report of the Committee on Medical Education be adopted.

Carried

REPORT OF THE COMMITTEE ON OCCUPATIONAL MEDICINE

Mr. Chairman and Members of the General Council:

271. The Committee's activities during the year have been directed toward improvement and promotion of Occupational Health Services. An article on "Medicine's Role in Industry" was prepared by the Chairman at the request of the General Secretary of the C.M.A. and published in the *Toronto Globe and Mail* in March of 1960.

272. Assistance was given to the Young Women's Christian Association in developing an improved medical examination form for their use throughout Canada.

273. A meeting of the Nucleus Committee was held during the annual Combined Conference of Ontario and Quebec Occupational Physicians at Britannia Lodge in Muskoka on October 14, 1960, at which six members were present. As a result several projects were begun:-

274. The booklet, "*Guiding Principles for the Provision of Occupational Health Services*", is to be given even wider distribution and translated into the French language.

275. A committee was appointed to study the matter of Standardization of Statistical and Disability Records for Occupational Health Services. It is recognized that this is a vast and complex subject and the project will have to be a continuing one for an indefinite period.

276. A simplified version of the C.M.A. Standardized Insurance Claim Form was developed and sent to all members of the Committee. It was suggested that this or some similar modification of the C.M.A. form be adopted by industries across Canada as a standard sickness disability certificate. Several of the Committee members have made favourable comments and it is hoped that standardization of such forms in industry will be achieved some time in the future.

277. The co-operation and assistance of all members of the Committee is acknowledged with thanks.

All of which is respectfully submitted.

DONALD K. GRANT,
Chairman.

Personnel of the Committee:
Nucleus:

Dr. Donald K. Grant, Toronto (Chairman)
Dr. K. Bell, Thorold
Dr. R. G. Birrell, Toronto
Dr. J. H. Baillie, Toronto
Dr. F. Brent, Montreal
Dr. H. Gagnon, St. Hyacinthe
Dr. C. D. Shortt, Montreal
Dr. A. F. W. Peart, Toronto (Secretary)

Divisional Representatives:

Dr. J. Hartley Smith, Mission City
Dr. T. R. Hamilton, Edmonton
Dr. W. S. Allan, Regina
Dr. P. K. Tisdale, Winnipeg
Dr. R. G. Birrell, Toronto
Dr. Milton G. Townsend, Montreal
Dr. H. Gagnon, St. Hyacinthe
Dr. C. H. Johnson, Edmundston
Dr. F. D. Kemper, Halifax
Dr. L. E. Lawton, St. John's

*Moved by Dr. R. M. Parsons,
seconded by Dr. R. O. Jones,*

*that the Report of the Committee on Occupational
Medicine be adopted.*

Carried

REPORT OF THE COMMITTEE ON NUTRITION

Mr. Chairman and Members of the General Council:

278. The Chairman attended a meeting of the Canadian Council on Nutrition in Ottawa on June 21 and 22, 1960.

279. The main subject discussed at the meeting was an excellent report prepared under the chairmanship of Dr. W. W. Hawkins, Atlantic Regional Laboratory, National Research Council, Halifax, on "A Plan for Presentation of a New Canadian Dietary Standard".

280. It is not possible to present findings from this report in detail, but a few interesting points raised are as follows:

- (a) Protein requirements were discussed in terms of type of protein in relation to amount needed. For instance, the estimate given is 70 grams of medium to poor protein for a 70 kg. individual, as against about 23 grams of excellent quality protein for the same person per day. Protein requirements must be assessed in terms of the type of food habitually consumed.
- (b) Calcium requirements depend to a great extent on prior intake. People on various diets can be in balance as low as 0.2 grams per day. Intakes of about 0.5 grams a day are recommended for Canadian adults, accustomed to high intakes. It should be remembered that calcium utilization is markedly influenced by the availability of vitamin D and other factors such as acidification of food in the stomach and the presence of phytates and oxalates.
- (c) Riboflavin, thiamin and nicotinic acid requirements are expressed as a ratio of vitamin per 1,000 calories of food intake. This is a widely accepted method of measurement.
- (d) The minimum adequate intake for ascorbic acid is 10 mg. per day, with a suggested level of 20 mg., allowing for a safety margin. Human breast milk contains 4-7 mg. per cent ascorbic acid, which would appear to be adequate. As many infants in Canada are on artificial food, they do need additional ascorbic acid at an early age.
- (e) Vitamin D needs have been estimated at 400 International Units per day, at all ages, with the possible exception that infants under the age of one year may need somewhat more. It should be noted that intakes of 1500-1800 I.U. per day of vitamin D have deleteriously affected appetite and growth. With so many potent vitamin preparations on the market, and additional vitamin D in virtually all evaporated milks and in prepared infant milk foods, there is some danger that certain infants may develop hypercalcaemia.
- (f) The recurrent theme in regard to dietary requirements is great individual variability, and apparent adequate adaptation to lower levels of intake in different countries where people have varying food habits.

281. The Canadian Council on Nutrition still opposes the addition of ascorbic acid to evaporated milk. The

representative of The Canadian Medical Association and one other member of the Council were outvoted on this issue at the recent meeting of the Canadian Council on Nutrition. It should be noted that even in large doses, ascorbic acid has no toxic effect. But addition of this vitamin to evaporated milk would prevent scurvy in infants who are not getting it from other sources.

282. Whereas the Committee on Nutrition of the C.M.A. is in favour of adding ascorbic acid to evaporated milk for reasons already discussed above, the Committee views with concern the strong trend of food manufacturers to add certain synthetic vitamins to foodstuffs beyond the probable physiological need. There is no adequate reason why certain dry cereals should have vitamin D added to the extent of 400 I.U. per ounce, and that chocolate powders or syrups, certain biscuits or even fruit drinks should also have this vitamin added.

283. The Committee on Nutrition of the British Columbia Division of The Canadian Medical Association has formulated a statement in regard to excessive use of mineral and vitamin supplements.

284. In co-operation with members of the Nucleus Committee a script has been written on "Scurvy in Infancy" for The Association.

285. In view of increasing unemployment in Canada, the Committee on Nutrition is concerned about the possibility of increasing malnutrition in the population. It would appear that this subject needs investigation, particularly by Provincial Departments of Health and possibly also by the Department of National Health and Welfare. The Committee suggests that well planned clinical and dietary food surveys should be undertaken by interested bodies or persons.

All of which is respectfully submitted.

W. HARDING LERICHE,
Chairman.

Personnel of the Committee:

Nucleus:

Dr. W. Harding leRiche, Toronto (Chairman)
Dr. J. Harry Ebbs, Toronto
Dr. John B. Firstbrook, Toronto
Dr. Elizabeth Chant Robertson, Toronto

Divisional Representatives:

Dr. Margaret Mullinger, Vancouver
Dr. O. E. Laxdal, Regina
Dr. D. L. Kippen, Winnipeg
Dr. H. T. McAlpine, London
Dr. Guy Joron, Montreal
Dr. E. S. Eddie, Bathurst
Dr. W. A. Cochrane, Halifax
Dr. J. F. Collins, St. John's

(In the absence of the Chairman of this Committee, the Report was presented to General Council by Dr. Margaret Mullinger.)

Moved by Dr. M. Mullinger,

seconded by Dr. R. M. Parsons,

that the Report of the Committee on Nutrition be adopted.

Carried

REPORT OF THE COMMITTEE ON PHARMACY

Mr. Chairman and Members of the General Council:

286. A major factor in recent controversies relating to drug prices, use of generic names, etc. has been an uncertainty of unknown magnitude regarding the purity, identity and potency of some drug preparations now on the market. The Committee considers it essential that steps be taken which will assure physicians that any drug dispensed on prescription will meet minimum standards. The Food and Drug Directorate obviously is unable to analyse samples of all production lots marketed. However, it recently has proposed a system of records and inspections (Trade Information Letter No. 191) which appears to provide a good basis for the control of drug quality. The Committee feels that the procedures outlined in these proposals could have a very favourable impact on the practice of medicine by assuring the quality, potency and uniformity of all drugs marketed in Canada. It wishes to endorse these proposals and to urge that the Food and Drug Directorate be given ample resources to implement them fully.

287. The very large number of new drugs currently on the market and introduced each year, and the extensive advertising which supports their sale has made it extremely difficult for the practising physician to learn and remember their characteristics. Inadequate information is particularly dangerous when it involves contraindications and toxicities. Present regulations require the inclusion of information regarding precautions and toxicities on package labels and/or inserts. However, current dispensing practices are such that these only infrequently reach either the physician or the patient. It appears more desirable to have adequate toxic hazards closely associated with the material which points out the uses and advantages of a drug. The Committee recommends the adoption of regulations requiring that all advertising material recommending the use of a drug also carry an adequate warning regarding contraindications and major toxicities.

Some discussion arose as to whether advertising material concerning certain drugs should include a warning about over-dosage and antidotes.

Moved by Dr. J. F. Meakins,
seconded by Dr. G. Joron,

that the last sentence of Section 287 be amended to read—"The Committee recommends the adoption of regulations requiring that all advertising material recommending the use of a drug also carry an adequate warning regarding contraindications and major toxicities, over-dosage and antidotal methods."

Carried

288. The continuing occurrence of serious bromide intoxication has called attention to the fact that bromide-containing preparations are readily available without prescription, and in containers which carry no adequate toxicity warnings. There appears to be little doubt that if these agents were to be introduced today as new drugs, they would be placed on the prescription drug list (Schedule F), and their long record of cumulative toxicity appears to be further justification for such a classification. The Committee recommends that all preparations containing appreciable amounts of bromide be dispensed only on prescription. If such action is not immediately practicable, it is recommended that the current permissible dosages (10 gr./dose or 20 gr./day) be decreased con-

siderably and that all packages and advertising material be required to include adequate warning regarding the cumulative toxicity of the preparations and their habituation liability.

All of which is respectfully submitted.

MARK NICKERSON,
Chairman.

Personnel of the Committee:

Nucleus:

Dr. Mark Nickerson, Winnipeg (Chairman)
Dr. J. P. Gemmell, Winnipeg
Dr. I. R. Innes, Winnipeg
Dr. P. E. Dresel, Winnipeg
Dr. S. Malkin, Winnipeg

Divisional Representatives:

Dr. Denys Ford, Vancouver
Dr. C. L. McNeil, Calgary
Dr. W. A. Allen, Saskatoon
Dr. F. S. Brien, London
Dr. Georges Hebert, Montreal
Dr. H. O. Tanning, Saint John
Dr. R. M. MacDonald, Halifax
Dr. Stewart MacDonald, Eldon
Dr. Ian Rusted, St. John's

Executive Committee Comment:

289. The adoption of the proposals contained in this report is recommended.

(*This Report was presented by Dr. A. D. Kelly in the absence of the Chairman, Dr. Mark Nickerson.*)

Moved by Dr. R. M. Parsons,
seconded by Dr. F. A. Dunsworth,

that the Report of the Committee on Pharmacy be adopted as amended.

Carried

REPORT OF THE COMMITTEE ON PUBLIC HEALTH

Mr. Chairman and Members of the General Council:

290. I beg herewith to present the annual report of the Committee on Public Health. Opinions on certain matters which had been referred to the Committee were sought by mail from both Nucleus and Corresponding Members. The Nucleus Committee had met on one occasion during the year and the minutes of this meeting were circulated among all members of the Committee for comment. It is felt that this report represents the consensus of the Committee.

Cigarettes and Lung Cancer

291. This matter was referred back by the 1960 Council with the direction that the Committee "study and bring in a recommendation with regard to an educational campaign that may be necessary with regard to cigarettes and lung cancer." The Committee feels that the first step would be for the C.M.A. to express its belief that a direct relationship exists between cigarette smoking and lung cancer and, accordingly, would recommend that the Council state as follows: The weight of evidence at present implicates cigarette smoking as the principal causative factor in the increased incidence of lung cancer. Therefore, there is here a public health problem of which the pro-

fession and the public should be aware. It is the duty of the individual doctor to point out the relationship of cigarette smoking and cancer to his patients; of departments of health and other health agencies to educate the public to the hazards of cigarette smoking and of authorities entrusted with health education in the schools to bring home to students the possible consequences that may follow the use of tobacco, especially in the form of cigarettes.

Medical Identification Cards

292. The local Board of Health of Toronto has suggested to the C.M.A. and other bodies that "individuals carry a card bearing information relating to their medical history." The Committee feels that there is considerable merit in an individual carrying a card on his person which would indicate immunization against tetanus or the presence of allergies, haemophilia, epilepsy, diabetes; and, as well, the name and address of his physician. These cards might be issued by a doctor to his patients as he saw fit. There are various cards in use at the present time but the Committee feels that some fairly permanent form which would cover all conditions would be the most satisfactory. However, the designing of such an identification card is proving to be very complicated. Voluntary organizations in our own country are deeply involved. In the U.S.A. the A.M.A. and A.P.H.A. and a non-profit organization known as Medic-Alert are interested. Medic-Alert is hoping to expand into Canada, Great Britain and Australia. In Great Britain the B.M.A., the Ministry of Health and the College of General Practitioners have been considering such a means of identification for some time without, as yet, producing a final answer. One of the members of the Committee has been entrusted with the task of bringing forward some suggestions for a means of medical identification either by card or disc or both. The Committee recommends that Council empower it to proceed further with this matter, taking into consideration suggestions from this Council and that the final design or plan be submitted to the Executive Committee for their approval and necessary action, preferably on a trial basis.

Labelling of Hazardous Household Substances

293. The U.S.A. has recently enacted a Hazardous Substances Labelling Act which has come to the attention of some correspondents of the General Secretary. Half of the poisonings reported from Poison Control Centres across Canada are from household chemicals. And about half of these chemicals are insecticides or pesticides—substances already labelled as poisonous. It is questionable whether any more attention would be paid to possible poisoning from all the other household substances if they were labelled such. Usually they are ingested by children who do not read and it is unlikely that parents would deliberately place any such substance in the way of a questing four year old. Education of the parent seems the best approach. We are also informed that the matter is under advisement by Dominion Council of Health. The advice and interest of the Deputy Minister of National Health is much appreciated here. The Committee recommends that no action in proposing a Hazardous Substances Labelling Act for this country be taken by the C.M.A.

Safety Caps on Medicine Bottles

294. The other important half of the reports from Poison Control Centres concerns medicines. These, again, are discovered by the marauding pre-schooler and often have the added advantage of having an interesting taste. The

Alberta Division is of the opinion that all bottles containing medicines or drugs should have a "safety cap". There are different designs of these safety caps but there is no law which requires their use. In correspondence with the Food and Drug Directorate there appeared to be several objections to enforcing the use of safety caps. These were stated as (1) a legal difficulty in defining "consumer" or "purchaser" if packaging were required to prevent injury to the health of the "consumer" or "purchaser"; (2) the value of safety caps had not yet been proven; (3) not all drugs are packaged in bottles and there would have to be a drastic change in packaging procedures; and (4) enforcement of such a regulation would be difficult. These objections appear somewhat specious and, in the opinion of the Committee, could be overcome without too much difficulty if the high incidence of drug poisoning in the pre-school child were fully realized and the will to prevent this state of affairs were in evidence. The Committee would, therefore, recommend that the C.M.A. request the Food and Drug Directorate of the Department of National Health and Welfare to bring forward legislation which would make the use of a safety cap on bottled medicines mandatory. There may be some difficulty in designing a satisfactory safety cap and it may be necessary to limit the legislation to those medicines in common use or to those which are most commonly associated with poisonings in children. Nevertheless, the Committee is convinced that the number of such tragic accidents can be reduced by such legislation. The meaning and intent of this recommendation is clear.

C.P.H.A. Resolution re Self-Medication

295. A resolution received from the Canadian Public Health Association invited the C.M.A. to assist "in studying the problem of self-medication in Canada and its effect on the health of the people of Canada". The Chairman of this Committee had already communicated his opinion on this resolution to the General Secretary. The Committee agreed that such a study would be difficult to initiate, its findings would be inconclusive and would have little effect upon the practice of self-medication. The public is already well aware of the opinion of the medical profession on this subject. The Executive Committee has concurred also with this opinion. The invitation of the C.P.H.A. to join in this study was, therefore, declined.

*Moved by Dr. G. Joron,
seconded by Dr. J. F. Meakins,*

WHEREAS self-medication is widespread, serious and sometimes even fatal:

BE IT RESOLVED that Council regrets that the Committee on Public Health did not accept the C.P.H.A. invitation to study the subject and that they be authorized to re-establish contact with the C.P.H.A. for possible further study of this problem.

Carried

Physical Fitness

296. Following conversations with various prominent physical educationists with respect to the 1960 report of this Committee, the time was considered opportune to convene a conference of representatives from the C.M.A. and the Canadian Association of Health and Physical Education and Recreation. The general purpose and value of such a conference and a tentative format was presented to the Executive Committee in October, 1960. Twelve delegates from each association were to be asked to attend and to participate in the reading of papers and discussions. In the case of the C.M.A. each Division was to

be requested to nominate one representative. Others from both associations and other interested bodies were to be invited as observers and discussants. Mr. Gordon Wright, Mr. Reg. Blackstock, President and Executive Secretary of the C.A.H.P.E.R., Dr. J. H. Ebbs, and the Chairman of this Committee would constitute the planning committee for the conference. The Executive Committee approved these plans and voted sufficient funds to bring its own members to the conference. The Secretariat of the C.M.A. ably assisted the planning committee in working out details and the conference was convened on March 4 and 5, 1961 at C.M.A. House. A digest of the papers presented on that occasion has been prepared and is available to anyone interested. General recommendations were brought forward. Some of these recommendations concern only the C.A.H.P.E.R., notably the one calling for the formation of a committee whose main function would be to work along with a similar committee to be constituted by the C.M.A. This recommendation for a committee from this association, together with the others which concern both associations and the C.M.A. especially, follows:

- 297.** 1. That a standing committee of the C.M.A. be established to study and report on all medical matters pertinent to physical fitness and physical education and that the Divisions of the C.M.A. be asked to establish corresponding committees to work at the provincial level.

Dr. G. E. Duff Wilson suggested that the proposed committee might be named "Committee on Physical Fitness and Recreation".

Some of the committee activities would be as follows:

- 298.** (a) Liaison with C.A.H.P.E.R. and other associations or governmental bodies concerned with health, physical education and recreation and to develop joint programs with these groups (for example—physical education and recreation programs for handicapped children and adults.)
- 299.** (b) To advise the medical profession, voluntary and governmental agencies and the public on matters pertaining to health, physical education and recreation.
- 300.** (c) To encourage and evaluate research in the general field of physical fitness. Because there are many obvious gaps in our knowledge at present, research should be undertaken on the following problems:
- (i) Collection of precise anthropometric data on Canadian school children of all ages in different provinces, and information on the effects of exercise on growth as reflected in stature, weight, muscular and skeletal development.
 - (ii) Measurement of the physical working capacity of representative sections of the Canadian population, both for accurate comparison with data from other countries, and to enable changes over the course of years to be observed and measured.
 - (iii) Study of the effect of continuing physical activity or inactivity on normal biological ageing.
 - (iv) Study of the relationship between physical activity and specific disease morbidity.
 - (v) Study of effect of different types of activity on physical performance.

301. It was recommended that the C.M.A. initiate discussions between the Department of Health and Welfare, the Medical Research Council, the Defence Research Board, the Canadian Society for Clinical Investigation, the Canadian Physiological Society, and the C.A.H.P.E.R., in an effort to co-operate and develop work in this field.

302. 2. Further suggestions for study by committees constituted by the C.M.A. and C.A.H.P.E.R. are:

(a) *Terminology*

There seems to be urgent need for the development and clarification of terminology in the field of physical fitness.

(b) *Role of Government*

The joint committees might give serious consideration to their concept of the role of Government in the field of physical fitness and might make appropriate recommendations to Government based on this concept.

(c) *"Clearinghouse" Services*

The joint committees might well consider how continuous "clearinghouse" services could be established in order to make appropriate recommendations.

(d) *Education of the Public*

The joint committees might also explore ways and means of utilizing mass communications in order to educate the public in matters pertaining to physical fitness.

(e) *Athletic Injuries*

The joint committees might take the lead in promoting the discussion of training methods, treatment of athletic injuries and related subjects, amongst specialists in the fields of physical education, physical medicine physiology.

3. That regular joint conferences of the committee of the C.M.A. and the committee of the C.A.H.P.E.R. be held. These conferences might be convened on or about the time of the annual meetings of the associations, alternating between the associations. It was suggested that these joint conferences might be facilitated if the annual meetings of the two associations were held at the same venue.

303. The Committee on Public Health would ask that these recommendations of the conference be adopted by this Council.

All of which is respectfully submitted.

G. E. DUFF WILSON,
Chairman.

Personnel of the Committee:

Nucleus:

Dr. G. E. Duff Wilson, Kitchener (Chairman)
Dr. A. R. J. Boyd, Toronto
Dr. Cope Schwenger, Toronto
Dr. Charlotte Horner, Cobourg
Dr. Gordon K. Martin, Toronto
Dr. J. R. Smith, Galt
Dr. E. J. Young, Toronto

Divisional Representatives:

Dr. C. G. More, Red Deer
Dr. M. Dantow, Saskatoon
Dr. William Watt, Winnipeg
Dr. W. G. Watts, Toronto
Dr. Donald G. MacKay, Montreal

Dr. J. A. Melanson, Fredericton
Dr. S. Dunn, Pictou
Dr. Burton Howatt, Charlottetown
Dr. T. A. Knowling, St. John's

*Moved by Dr. G. E. Duff Wilson,
seconded by Dr. F. A. Dunsworth,*

*that the Report of the Committee on Public Health be
adopted as amended.*

Carried

REPORT OF THE COMMITTEE ON AWARDS, SCHOLARSHIPS AND LECTURES

Mr. Chairman and Members of the General Council:

304. The Committee on Awards, Scholarships and Lectures is a Standing Committee of The Association but it cannot claim to be among the most active. Its terms of reference relate to consideration of nominees for the F.N.G. Starr Award and any other such awards within the gift of The Association, the selection of the Orator or Lecturer appropriate for the year and the choosing of the recipient of any scholarship within the gift of the C.M.A.

305. The business of the Committee is usually conducted by correspondence and the current year under review is illustrative of the work. At the suggestion of the Local Program Committee for the 94th Annual Meeting in Montreal and with the concurrence of the Central Program Committee, Dr. Hugo Rosenqvist of Stockholm was nominated as Lister Lecturer. An invitation was authorized and we are glad to report that Dr. Rosenqvist will present the Lister Lecture on the subject "Biliary Surgery in Sweden" and that he will also participate in the Economics Day program by speaking on "Health Insurance in Sweden".

306. The Executive Committee consulted the Committee on Awards, Scholarships and Lectures with respect to a proposal that there be established an award to be known as The Canadian Medical Association Gold Medal. It was proposed that the factors in selection of the recipient should be service in medical organization, outstanding service in raising standards of medical practice, or personal contributions to the advancement of the art and science of medicine. Your Committee gave consideration to the relationship that such an award might bear to the forms of recognition of special service already available. To refresh your memories there are—the Past President's Badge, Badges of Senior Membership, Special Certificates for Honorary Membership and finally The Frederic Newton Gisborne Starr Award. It would appear that the terms of reference for the proposed new award would be related rather closely to those of the Starr Medal and therefore might tend to lessen the value of one or the other. Too many badges of distinction in any organization have a tendency to lessen the value of all. Your Committee expressed itself, therefore, as not favourable to the creation of this distinction.

307. The Canadian Medical Association is trustee of a sum of money out of which two Osler Scholarships are provided at intervals of approximately three years. The selection of the Osler Scholars is vested in the Faculty of Medicine, McGill University and the Medical Board of

The Montreal General Hospital. Although it is not within the responsibility of your Committee to identify the Osler Scholars, it is a pleasure to report that each of the nominating bodies selected the same recipient of this honour, Dr. Carl Arthur Goresky of Montreal, who has received both Osler Scholarships for the year 1960-61.

All of which is respectfully submitted.

R. M. JANES,
Chairman.

Personnel of the Committee:

Dr. R. M. Janes, Toronto (Chairman)
Dr. J. R. Lemieux, Quebec
Dr. R. B. Kerr, Vancouver
Dr. D. Slater Lewis, Montreal
Dr. D. A. Thompson, Bathurst

Executive Committee Comment:

308. Your Executive Committee has reconsidered the matter of the establishment of a C.M.A. Gold Medal in the light of the comments of the Committee on Awards, Scholarships and Lectures and it is our considered view that such an award should be established. It is proposed that consultation be held with Dr. Janes in the hope of making a firm recommendation to the General Council and if possible to present criteria and qualifications for the award.

Dr. Lyon reported that he and Dr. Janes had given further consideration to this award and had reached an agreement. The terms of reference, which had been approved by the Executive Committee for presentation to Council, are as follows:

1. The award shall be known as *The Canadian Medical Association Medal of Service.*
2. Only one medal may be awarded in any one year and *The Association shall be under no obligation to make the award annually.*
3. Nominations shall be made in writing accompanied by a suitable citation by any member of the General Council. The nominations to be made to the Chairman of the Committee on Awards, Scholarships and Lectures.
4. The nominations shall be received by the Chairman of the Committee on Awards, Scholarships and Lectures six months prior to the Annual Meeting at which the award is to be presented.
5. The Committee on Awards, Scholarships and Lectures shall submit their report to the Executive Committee at a meeting at least one month prior to the meeting of the General Council.
6. The Executive Committee shall be empowered by the General Council to approve or reject, on behalf of the General Council, the report of the Committee on Awards, Scholarships and Lectures in this respect.
7. The recipient of this award shall be offered the opportunity of attending the Annual General Meeting for acceptance of this award at the expense of The Canadian Medical Association.
8. In case of the demise of the nominee for the award after selection but prior to presentation, the award shall be presented posthumously.
9. The medal shall take the form of a gold medal with a ribbon which may be worn at official functions.

Conditions governing the Award:

1. Service to the profession in the field of medical organization.
2. Service to the people of Canada in raising the standards of medical practice in Canada.

3. Personal contributions to the advancement of the art and science of medicine.
4. To qualify, a recipient must have made contributions in at least two of the above fields.

Moved by Dr. E. K. Lyon,
seconded by Dr. W. W. Baldwin,

that the terms of reference governing the award of the C.M.A. Medal of Service be adopted by this General Council.

Carried

Moved by Dr. D. Slater Lewis,
seconded by Dr. H. V. Morgan,

that the Report of the Committee on Awards, Scholarships and Lectures be adopted as amended.

Carried

REPORT OF THE COMMITTEE ON HOSPITAL SERVICE AND ACCREDITATION

Mr. Chairman and Members of the General Council:

309. Since my last report to General Council, there have been two meetings of the Canadian Council on Hospital Accreditation. The first meeting was held on October 15, 1960 and the second on January 28, 1961.

310. Dr. H. Paul Melanson was appointed to the Committee to replace Dr. E. Kirk Lyon, and at the first meeting of Council Dr. Melanson was appointed a Director of the Canadian Council on Hospital Accreditation.

311. It is with regret that I report that Dr. Lyon is no longer serving on our Committee. His contribution to our Committee and to the Canadian Council on Hospital Accreditation has been unequalled by that of any other individual. At the October meeting, Dr. Thibault read a formal address to Dr. Lyon, thanking him for his contribution to the accreditation program in general, and for his work in the initiation of the Canadian program in particular, and Council presented him with a copy of the History of the American College of Surgeons.

312. Council was informed that a committee of the Canadian Council on Hospital Accreditation had met with the Minister and Deputy Minister of National Health and Welfare and that it had been agreed that the work of the accreditation program would be supported financially by the Federal Government through the general Public Health Grant which is available to the provinces. The total amount was \$30,000 and it was to be contributed by the provinces on a per capita basis. It was made particularly clear that there would be no strings attached to any of these monies and it was indicated that Council has adhered rigidly to this principle. In the case of those provinces which have asked for special privileges because of their financial assistance, even though the requests have been of a minor nature, C.C.H.A. has consistently refused to accept any monies from these provinces.

313. The C.C.H.A. will continue to maintain liaison with the Joint Committee on Accreditation of Hospitals.

314. In view of the increasing work of the program in hospital accreditation the Council decided to advertise for an Assistant to the Director of the C.C.H.A., which candidate should be a bilingual physician. As I write this report, I have just received notification that Dr. Marc Tardif has been appointed to the position.

315. The C.C.H.A. gave consideration to Professional Activity Studies (P.A.S.), and the Medical Audit procedures being conducted by Dr. Virgil Slee, University of Michigan. It is unfortunate that at this time Council is unable to proceed further with P.A.S. owing to the financial involvement.

316. At the January meeting, election of officers for the year 1961 took place, at which time the following were elected:

<i>Chairman:</i>	Mr. James Emerson Robinson
<i>Vice Chairman:</i>	Dr. Nathan Nauson Levinne
<i>Past Chairman:</i>	Dr. Andrew Lawrence Chute
<i>Secretary:</i>	Dr. William Ivison Taylor
<i>Treasurer:</i>	Mr. Douglas R. Peart
<i>Honorary Secretary:</i>	Dr. Arthur Dill Kelly
<i>Honorary Secretary:</i>	Dr. William Douglas Piercey
<i>Special Adviser:</i>	Dr. Eugene Thibault

317. The Canadian Dental Association wrote requesting that they be permitted to make a presentation to C.C.H.A. of their views as to how accreditation could best serve to help improve dental care in Canadian hospitals. Council agreed to invite the Canadian Dental Association to its next meeting.

318. Dr. McNeel presented a comprehensive report on accreditation for mental hospitals, and it was felt by Council that this should be so constructed as to make standards for mental hospitals a supplement to the existing standards for the accreditation of Canadian hospitals.

319. Dr. Neilson then presented the following financial statement and budget:

CANADIAN COUNCIL ON HOSPITAL ACCREDITATION
BALANCE SHEET AS AT DECEMBER 31, 1960

<i>Assets:</i>	
Cash.....	\$19,355
Prepaid Insurance.....	187
Accrued Interest.....	37
	<u>\$19,579</u>
<i>Liabilities:</i>	
Accrued Liability.....	\$ 150
Deferred Revenue—Provincial Grants.....	5,554
Surplus	
Balance—December 31, 1959..	6,891
Excess of Revenue over	
Expenditure.....	6,984
	<u>13,875</u>
	<u>\$19,579</u>

CANADIAN COUNCIL ON HOSPITAL ACCREDITATION
STATEMENT OF REVENUE AND EXPENDITURE
FOR THE YEAR ENDED DECEMBER 31, 1960

	<i>Actual for year</i>	<i>Budget for year</i>
<i>Revenue:</i>		
Contributions from members—		
Canadian Hospital Association.....	\$20,000	\$20,000
The Canadian Medical Association	16,000	16,000
Royal College of Physicians and		
Surgeons.....	8,000	8,000
L'Association des Medecins de		
Langue Francaise du Canada....	4,000	4,000
Provincial Grants		
Ontario.....	7,693	
Quebec.....	6,461	
Saskatchewan.....	1,165	
New Brunswick.....	763	
Newfoundland.....	581	
Sale of Publications.....	2,729	1,000
Interest Income.....	221	200
	<u>\$67,613</u>	<u>\$49,200</u>

Expenditure:

Salaries and Professional Fees		
Field Representatives.....	19,170	20,300
Director.....	15,000	15,000
Secretarial.....	4,062	3,900
Additional Assistance.....	3,067	3,120
Travelling.....	6,940	6,450
Meetings.....	3,931	3,400
Office Expenses:		
Printing.....	3,484	3,330
Stationery Supplies and Sundries..	1,060	1,120
Postage, Telephone and Telegraph..	957	760
Office Equipment.....	618	750
Legal, Audit and Miscellaneous....	539	350
Contribution to The Canadian		
Medical Association for rent and		
maintenance.....	1,296	1,400
Accident and Indemnity Insurance..	505	570
	<u>\$60,629</u>	<u>\$60,450</u>
EXCESS OF REVENUE OVER EXPENDITURE	\$ 6,984	(\$11,250)

BUDGET

	<i>Actual 1960</i>	<i>Estimate 1961</i>
<i>Revenues:</i>		
1. Canadian Hospital Association...	\$20,000	\$20,000
2. The Canadian Medical Association	16,000	16,000
3. Royal College of Physicians and		
Surgeons.....	8,000	8,000
4. L'Association des Medecins de		
Langue Francaise du Canada....	4,000	4,000
5. Province of Saskatchewan.....	1,165	1,554
6. Province of New Brunswick.....	763	1,017
7. Province of Quebec.....	6,461	8,615
8. Province of Newfoundland.....	581	774
9. Province of Ontario.....	7,693	10,257
10. Province of Nova Scotia.....	—	—
11. Province of Prince Edward Island	—	176
12. Province of Manitoba.....	—	1,525
13. Province of Alberta.....	—	—
14. Province of British Columbia....	—	—
15. Sale of Publications.....	2,729	1,250
16. Interest Income.....	221	400
	<u>\$67,613</u>	<u>\$73,568</u>

Expenditures:

Salaries and Professional Fees:		
1. Director(s).....	\$15,000	\$27,000
2. Field Representatives.....	19,170	17,700
3. Secretarial.....	4,062	4,500
4. Clerical Assistance.....	3,067	5,400
5. Travel Expenses—Surveys.....	6,940	7,100
6. Council and Committee Meetings		
—Expense.....	3,931	4,500
7. Postage, Telephone and Telegraph	957	1,100
8. Office Equipment.....	618	750
9. Stationery Supplies and Sundries..	1,060	1,150
10. Printing.....	3,484	4,000
11. Audit, Legal and Miscellaneous...	539	550
12. Rental Fees to the C.M.A.....	1,296	1,900
13. Accident and Indemnity Insurance	505	570
14. Moving.....	—	500
	<u>\$60,629</u>	<u>\$76,720</u>

OBSERVATIONS

320. During the year 1960, one hundred and fifty-eight surveys were made, which is an increase of twenty-four over the previous year. This indicates the growing extent of the value of our program to the individual hospital—and the increasing desire of hospitals to participate in accreditation.

321. Increasing demands for accreditation will of necessity mean increasing funds in order to achieve the necessary goal. An examination of the revenue anticipated for the year would indicate that \$59,650 of the \$73,568, or 80% of the revenue, presently is derived from the

organizations directly associated with the Council. The moneys presently being paid by the member organizations to Council have almost reached the maximum which any individual association can contribute. Expanding demands, in particular by the mental institutions, will mean that Council will have to look even beyond its present sources of revenue. However, Council remains adamant in its stand that any monies which may be received from sources other than member associations must be received without any terms of restriction. It is further hoped that at all times monies received from member organizations will be in excess of 50% of the expenditures.

All of which is respectfully submitted.

N. N. LEVINNE,
Chairman.

Personnel of the Committee:

Dr. N. N. Levinne, Toronto (Chairman)
Dr. J. R. Francis, Calgary
Dr. B. H. McNeel, Toronto
Dr. H. Paul Melanson, Moncton

Dr. Levinne referred to the item "Revenues" in the statement: Nova Scotia has now agreed on a payment of approximately \$1200; Alberta has also agreed to contribute for 1960 and 1961; no commitment from British Columbia.

*Moved by Dr. C. J. Houston,
seconded by Dr. H. A. L. Portnuff,*

BE IT RESOLVED that this meeting instruct its members on the Canadian Council on Hospital Accreditation to exercise even greater vigilance in protecting both the patients' welfare and the standards of medical practice.

Carried

*Moved by Dr. Glenn Sawyer,
seconded by Dr. W. W. Wigle,*

that this Council deprecates any legislation which would prevent a doctor, as a private citizen, from being elected to the Board of a hospital.

Carried

*Moved by Dr. J. W. Dales,
seconded by Dr. R. A. Dolan,*

that this General Council recommend to the Executive Committee that the question of the relationship between active members of medical staffs to boards of administration of hospitals be studied by the C.M.A.

Carried

*Moved by Dr. Thomas Primrose,
seconded by Dr. D. I. Rice,*

that the Committee on Public Relations take steps to acquaint the public of the advantages of using a duly accredited hospital.

Carried

*Moved by Dr. N. N. Levinne,
seconded by Dr. S. C. Best,*

that the Report of the Committee on Hospital Service and Accreditation be adopted as amended.

Carried

REPORT OF THE COMMITTEE ON CHILD HEALTH

Mr. Chairman and Members of the General Council:

322. The terms of reference for the Committee on Child Health have been approved by the Executive Committee of The Canadian Medical Association as follows:

This Committee shall study and report on pertinent matters relative to the health of infants and children from birth to adolescence and to the reduction of morbidity and mortality in this age group. The Committee may make recommendations for the improvement of facilities to this end and for the education of the profession in this field.

323. Several Divisions have had very active committees working on special aspects of child health for some years. It is hoped that the terms of reference of these established committees may be changed to correspond to the above and that their work, in the future, be broadened to include the whole problem of child health. Other Divisions have been slow in starting. It is hoped that in another year there will be some definite activity in each Division along the lines outlined above.

324. Newfoundland's Committee on Child Health is under the chairmanship of Dr. Clifford Joy of St. John's. They are starting a perinatal study in a hospital in St. John's with the idea of later expanding this study to the whole province.

325. The Prince Edward Island Divisional representative on the Committee on Child Health is Dr. M. N. Beck of Charlottetown. Some of the members of his committee are presently engaged in the study of the mental health needs of children. It is understood from Dr. Beck that they will be giving the whole field of child health consideration in the near future.

326. Dr. F. W. Jeffrey of Ottawa has been chairman of the Ontario Committee on Child Welfare since its inception five years ago. Their program has been quite active and includes four major projects:

1. A program on haemolytic disease of the newborn.
2. A program on child safety. Essentially this program attempts to make parents more aware of their responsibilities and outlines for them the protection required and the training necessary to improve the accident record. Five safety leaflets have been prepared and distributed. They also sponsor an annual conference on child safety which is attended by representatives of about forty different agencies in Ontario interested in the welfare of children.
3. They are preparing a placard on the management of emergencies of the newborn.
4. Their largest program is one on the handicapped child. They had a conference in this regard last November and plan another this fall. This is an attempt to survey the services available in Ontario for handicapped children and to aid in their improvement or expansion.

327. Manitoba's Divisional representative is Dr. Harry Medovy of Winnipeg. Dr. Medovy plans to have his committee act as a sort of medical conscience for child health in that province. They intend to use existing organizations and committees to carry out the various details of the child health program. A program designed to reduce the incidence of cigarette smoking among school children is being carried on as a controlled study through

the City of Winnipeg Health Department. A registry of handicapped school children and of pre-school children with known handicapping conditions who have been attending the Children's Hospital is also being drawn up. The make-up of the physical training program in public schools in Manitoba may be reviewed. A positive approach designed to reduce nutritional disease especially scurvy in Manitoba is being undertaken. There has been a perinatal study going on in Winnipeg for some years. Generally, Manitoba plans to concentrate their attention in areas where child health services are inadequate or improperly organized, where gaps in parental counselling at various professional levels seem apparent, and possibly through various media of communication bring to the attention of the public, matters pertaining to child health which they feel are not clearly appreciated and/or misinterpreted in these media at the present time.

328. In 1954 the Alberta Division, Canadian Medical Association, established this Perinatal Mortality Committee, which was to study infant deaths, including stillborns and infants dying during the first seven days of life. It was planned that through co-operation between the University of Alberta, the College of Physicians and Surgeons, and the Associated Hospitals of Alberta, to improve perinatal mortality by means of education.

329. The Perinatal Mortality Committee is composed of five doctors elected by the Alberta Division and several ex officio members representing the Departments of Obstetrics, Paediatrics, and Pathology at the University of Alberta and representatives of the Provincial Department of Public Health, including a representative of the Medical Officers of Health and the Nursing Consultant in Maternal and Child Health. In addition to this central committee, local Perinatal Mortality Committees have been established at the eleven largest hospitals in Alberta. To obtain information concerning the circumstances surrounding perinatal death, a questionnaire was compiled and is supplied to every hospital in the province, with the request that one should be completed by the doctor in charge whenever a perinatal death occurs. In those hospitals which have a local Perinatal Mortality Committee, these questionnaires are reviewed and discussed and the cause of death is classified. These questionnaires are then forwarded to the central committee where final coding of the cause of death is completed. From the smaller hospitals with no local committee, questionnaires are forwarded directly to the central committee for review and coding. In this way information has been gathered from about 1,200 doctors practising in somewhat over 100 hospitals. The co-operation of individual practitioners from the outset, has been extremely gratifying. The central committee, in order to deserve this continued co-operation, has consistently endeavoured to maintain an educational attitude in its dealings with individual practitioners and has always been ready to reconsider its opinion, if the information available proved to be incomplete.

330. The problem of classifying the cause of death proved to be a major problem, but the Alberta Committee gradually devised a cross-index type of classification, which links together the pathology in the infant with the clinical features of the mother's pregnancy and labour, giving a two dimensional picture of the cause of death. The information was filed originally on Keysort cards, but in 1961 the committee will start using IBM cards. This has become necessary as there are now over 5,000 reports on record and automatic sorting has become essential to

review the massive amount of material available. At first an attempt was made to record whether a perinatal death was preventable, but the committee now records what they consider to be preventable factors in any case. A form letter is sent to the attending physician, giving the central committee's final classification of the cause of death and if preventable factors are considered to be present, the doctor receives an individual letter setting out the Committee's opinion.

331. In addition to this individual contact with medical practitioners, the Committee has prepared an annual report containing a statistical review of perinatal mortality in the province as a whole and also in each hospital individually. Contact with hospitals was established directly by the Executive Secretary of the Committee, who visited all the rural hospitals herself.

332. The results obtained during the past six years are difficult to assess. One effect has been to focus the attention of the medical profession in this province on the problems associated with perinatal mortality. Specifically by drawing attention to the problem of the erythroblastotic baby, more Rh negative mothers with antibodies are transferred from rural areas to larger centers equipped to carry out replacement transfusion. Apgar rating is done routinely in many hospitals now. The Committee also has the impression that the consultation rate throughout the province has increased.

333. Nursing services in the province have received the attention of the Committee and in co-operation with other organizations concerned, certain advances have been made. The Provincial Department of Public Health now has a nursing consultant in maternal and child health, who in addition to her other duties, is an ex officio member of the Committee. The University of Alberta Hospital offers a course in the nursing care of premature babies semi-annually and the University School of Nursing offers an advanced course in practical obstetrics twice a year. A nursing care survey committee, financed by the Provincial Department of Public Health, is at present reviewing practices in Alberta.

334. Contact with hospitals throughout Alberta has been mentioned above. A questionnaire on equipment deficiencies was sent out and completed in 1958. On the Committee's recommendation all hospitals in the province have been supplied with manuals on minimal standards recommended for the care of newborn infants. Some improvement in hospital records has, we believe, also been obtained.

335. In this report Dr. Corbet has dealt in some detail with the organization of the Perinatal Mortality Committee and only indicated briefly the directions in which the information obtained has been utilized, hoping that this will be of some help to those interested in setting up a similar study.

336. For some years to come the perinatal study will comprise the major effort in the whole problem of child health in this province. The Provincial Government poison control program and the mental health services in Alberta are two other projects in which the Committee feels that it should show interest.

337. British Columbia, New Brunswick, Quebec and Saskatchewan have appointed their Divisional representatives. However, we do not have any definite information

on their programs at this time. Nova Scotia has not yet made an appointment to this Committee.

All of which is respectfully submitted.

L. C. GRIDDALE,
Chairman.

Personnel of the Committee:

Nucleus:

Dr. L. C. Grisdale, Edmonton (Chairman)
Dr. N. K. Duncan, Edmonton
Dr. T. A. Gander, Edmonton
Dr. P. J. Kimmitt, Edmonton
Dr. J. K. Martin, Edmonton

Divisional Representatives:

Dr. J. Dean, Vancouver
Dr. R. C. B. Corbet, Calgary
Dr. A. M. Goodfellow, Regina
Dr. Harry Medovy, Winnipeg
Dr. F. W. Jeffrey, Ottawa
Dr. Albert Royer, Montreal
Dr. S. H. Weyman, Saint John
Dr. C. J. Joy, St. John's
Dr. M. N. Beck, Charlottetown

Moved by Dr. L. C. Grisdale,

seconded by Dr. C. J. W. Beckwith,

that the Report of the Committee on Child Health be adopted.

Carried

REPORT OF THE COMMITTEE ON CANCER

Mr. Chairman and Members of the General Council:

338. There were no matters referred to the Cancer Committee during the year for its consideration.

339. During the past 12 months your Cancer Committee has considered the feasibility of initiating a number of clinical studies in Canada. There can be no doubt that there are many unanswered questions in this field, some of which could be answered by carefully planned studies involving a significant number of patients. It is our opinion that many of the Canadian centres could be utilized for such studies and that they would unselfishly co-operate in such a program.

340. We recognized several problems, one of which is the necessity of sound statistical planning and control. To this end we have requested help from the National Cancer Institute, and they have recently formed a Clinical Advisory Committee under the able Chairmanship of Dr. Rocke Robertson. Our Committee will be meeting with theirs in Montreal at the time of the Annual Meeting to discuss plans for this program, which we hope will materialize under the joint auspices of The Canadian Medical Association and the National Cancer Institute.

All of which is respectfully submitted.

R. C. HARRISON,
Chairman.

Personnel of the Committee:

Divisional Representatives:

Dr. R. C. Harrison, Edmonton (Chairman)
Dr. J. M. Campbell, Saskatoon
Dr. P. H. T. Thorlakson, Winnipeg

Dr. R. K. Magee, Peterborough
Dr. W. Mason Couper, Montreal
Dr. H. S. Morton, Montreal
Dr. R. B. Eaton, Moncton
Dr. W. R. C. Tupper, Halifax
Dr. M. J. M. Putnam, Charlottetown
Dr. H. B. Murphy, St. John's

Moved by Dr. H. S. Morton,

seconded by Dr. R. C. Harrison,

WHEREAS there are now provincial Tumour Registries or nuclei for provincial Registries in all provinces:

THEREFORE BE IT RESOLVED that this Council recommends the formation of a complete national Tumour Registry in Ottawa;

BE IT FURTHER RESOLVED that the co-operation of the National Cancer Institute, Canadian Cancer Society, D.B.S. and the medical profession of Canada be sought to develop this national Registry as soon as possible with exploration of the possibility of financing this through Federal-Provincial grants.

Carried

The Chairman of the Committee on Cancer, Dr. R. C. Harrison, submitted the following supplement to the Report:

"Your Chairman met yesterday with the Clinical Advisory Committee of the National Cancer Institute. We discussed the present clinical research activities of the Institute, and the feasibility of instituting clinical trials in Canada. They have requested that we submit to them a proposal for their consideration."

Moved by Dr. R. C. Harrison,

seconded by Dr. H. S. Morton,

that Council authorize this Committee to work in co-operation with the National Cancer Institute to establish a program of clinical trials in Canada and that Council allocate the sum of \$8000 from the King George V Fund for this purpose.

Carried

Moved by Dr. N. H. Gosse,

seconded by Dr. H. S. Morton,

RESOLVED that this Association reasserts its interest in the objectives of the Canadian Cancer Society and urges upon its members the importance of realigning themselves wherever possible with interested laymen in that Society, in such efforts as may properly be undertaken to reach those objectives.

Carried

Moved by Dr. R. C. Harrison,

seconded by Dr. N. H. Gosse,

that the Report of the Committee on Cancer be adopted as amended.

Carried

REPORT OF THE COMMITTEE ON PUBLIC RELATIONS

Mr. Chairman and Members of the General Council:

341. Before outlining the current activities of the Public Relations Committee, I would like to refer briefly to our supplementary report which was presented to the General Council last year. At that time, you will recall that the

Public Relations Committee made three recommendations which were referred back to the Executive Committee for further study. They were:

- (a) The appointment of an outside PR consultant for the C.M.A.
- (b) The employment of an additional fully-trained Public Relations Officer.
- (c) The establishment of a C.M.A. office in Ottawa.

342. I am pleased to report that our recommendation regarding the appointment of an outside PR consultant has received Executive Committee approval. This decision was arrived at, following a recommendation of Woods, Gordon, and Company, Management Consultants; and after reviewing nine applicants, the C.M.A. Secretariat and the Public Relations Committee concurred on recommending the appointment of John Doherty and Company Limited, Ottawa. This recommendation was approved by the Executive Committee last February.

343. With regard to item (b) the Public Relations Committee further reviewed this recommendation last October, and agreed that as medical economics would be playing an important part in C.M.A. activities, any additional Secretariat assistance in this regard should have priority. The Committee felt, however, that the Public Relations Department should be kept in mind for a staff addition, a year or two hence.

344. The establishment of a C.M.A. outpost in Ottawa has received the careful reconsideration of both the Executive Committee and this Committee on Public Relations. During the course of our deliberations, we were advised of another development in this regard. Through the Ontario Medical Association, the Ottawa Academy of Medicine had offered the C.M.A. office space in their building to facilitate the establishment of a C.M.A. Office in Ottawa. The Executive referred this matter to the PR Committee for study, and after careful consideration the following recommendation was submitted and subsequently accepted by the Executive Committee at their meeting on May 4.

WHEREAS the Ottawa Academy of Medicine has expressed interest in possible establishment of a branch C.M.A. office in Ottawa and

WHEREAS the above mentioned Academy has extended an invitation to the C.M.A. to occupy space in their building,

BE IT RESOLVED that this Committee on Public Relations recommend to the C.M.A. Executive Committee that the C.M.A.:

1. Express its appreciation to the Ottawa Academy of Medicine for its interest in C.M.A. public relations in the Ottawa region, and the offer of office space for a C.M.A. Ottawa office.
2. Arrange, with the approval of the Ontario Division of the C.M.A. that a representative of the C.M.A. Secretariat be invited to attend appropriate meetings of the Ottawa Academy of Medicine.
3. Encourage and help support the public relations efforts of the Ottawa Academy of Medicine, e.g. provision of qualified speakers, printed material, etc.
4. Request that the Ottawa Academy of Medicine appoint a member doctor or doctors to direct this activity in the closest liaison with the C.M.A.
5. That the C.M.A. office in Toronto will be available, at all times, through any appropriate means of communication, to supply information to the Ottawa physicians.

6. Will keep under active study the actual need for an office in Ottawa, particularly if the Royal Commission on Health Services be based in that city.

345. Many factors pro and con were weighed in reaching this decision and it is the consensus that the lack of experienced personnel to man such an office, the expense involved and the possibility of misinterpretation of our motives, influenced our decision. We are aware that relationship with government and government departments are good and that channels for two-way communication have been well utilized. The presence of our new consultant in Public Relations in Ottawa is an added advantage which was considered when the appointment was made.

346. During the past year, the Public Relations activities of The Canadian Medical Association have in the main been designed to put into action the original objectives of The Association which were stated in 1867; and judging from the intense interest of national news media in telling the medical story, it further strengthens our belief that as a profession, Canadian medicine has set a standard second to none.

347. In order that you may assess our activities relative to various segments of the public, the Committee's report this year is divided into three specific phases, namely: intra-professional relations; public information and education; and medical-government relations.

INTRA-PROFESSIONAL RELATIONS

348. Although we have had a most active twelve months, the Nucleus of the Committee on Public Relations is quite aware that certain aspects of our program require special attention. In this regard, I am referring to our responsibility to develop an awareness within the profession of the importance of strengthening doctor-patient relations. The clinical aspect of our relations has never been higher; but Divisional PR discussions have indicated that adverse comment on our attitude toward the patient is often expressed.

349. Many of these adverse comments are relative to a misunderstanding by the patient of the doctor's problems. The Ontario Medical Association has already endeavoured to strengthen doctor-patient relations through the distribution of a pamphlet "Information for Patients", which tactfully discusses in detail such items as: emergency calls; house calls; fees, etc. Similar material to that mentioned above is being used by other Divisions; and the PR Committee will continue to study this phase of our program.

350. Realizing the need to provide Canadian doctors with information about available financial assistance for graduate and/or postgraduate medical study, the Public Relations Department of the C.M.A. have contacted faculties of medicine and other agencies in Canada, United States and Europe, for current data in this regard. Some two hundred letters were sent out and several months were taken in compiling the material which is being published in the *Canadian Medical Association Journal*.

351. The C.M.A. medical recruitment booklet "Doctors of Tomorrow", which was produced in 1959, is still in demand and thousands of copies each year are sent out to secondary schools throughout Canada and to local medical societies for distribution during special "career days" in their respective communities. The Public Relations

Committee has been very anxious to keep in touch with provincial boards of education regarding our booklet, and following a recent letter to these outlets, many requests for copies were received.

352. As stated last year, we have endeavoured to co-ordinate the public relations activities of all Divisions and the National Office. Since our last report to the General Council, we have held two Public Relations Meetings of a national nature. In each instance the Public Relations Chairmen, along with Divisional Public Relations Officers, attended the meetings. These periodic get-togethers have assisted immeasurably in making it possible for us to determine when and where PR action should be taken. Then too, these bi-yearly conferences provide an opportunity for each Division to exchange ideas with their colleagues, which has strengthened the overall public relations programs of the medical profession.

353. During our last PR Committee meeting, we discussed the possibility of having the C.M.A. crest appropriately altered to include a bilingual interpretation. I am pleased to report that a motion to this effect was passed on to the Executive Committee, who accepted our recommendation.

354. With a desire to strengthen doctor-patient relations, the PR Committee prepared a series of four posters directed to the profession featuring: emergency medical service; poorly written prescriptions; discussion of fees; and late appointments. This project met with the approval of the majority of the Divisions, and the posters were reproduced in the January 7 issue of the Canadian Medical Association Journal. Similar posters will appear in the C.M.A.J. from time to time, rather than having them placed in the medical lounge of hospitals, as originally planned.

355. Other PR aids in strengthening doctor-patient relations have been made available to the profession, i.e. the C.M.A. Doctors' Fee Plaque; and the booklet "Winning Ways with Patients".

356. This year in order to stimulate more interest in the C.M.A. Annual Meeting, all hospitals in Canada with twenty-five beds or over received a poster highlighting the scientific program. These posters were placed in the medical lounge of the hospitals concerned. As in previous years PR activity for the Annual Meeting still represents an important assignment in the C.M.A. PR program.

357. Another phase of our intra-professional relations program that has aroused considerable interest is the showing of the documentary film on the British National Health Service. This film entitled "On Call to a Nation" has been shown to medical societies throughout the country—and is still in demand.

358. Following a motion made at the November meeting of this Committee, the B.M.A. film "An Enquiry Into General Practice" was sent to the Nova Scotia Division as a beginning of pilot showings to all Divisions. After reviewing the film it was considered unsuitable for Canadian purposes, so the Committee decided to discontinue further distribution.

PUBLIC INFORMATION AND EDUCATION

359. In co-operation with news media outlets, national and local, the C.M.A. has had the opportunity of imparting frequent health information to the general public.

Almost daily, representatives of the press, radio, and television are in touch with The Association's Public Relations Department, seeking medical information to be incorporated into their news story or broadcast. Assistance in this regard insofar as the C.M.A. is concerned makes it possible for the public to become more familiar with the advances being made in medical science.

360. Shortly after the 1960 Annual Meeting, the Canadian Broadcasting Corporation in co-operation with the C.M.A. and affiliated societies, introduced a series of ten one-half hour radio broadcasts on the progress being made in various fields of medical research in Canada under the title "Frontiers of Medicine". Judging from public comments, the series was most informative. Other radio and television programs on medical subjects are continually being produced.

361. During one of our meeting discussions on news media relations, the Committee recommended that the PR Department of the C.M.A. try to obtain advance information of pending broadcasts and articles concerning medicine, and that the profession be advised in the most practical way.

362. The Committee was also concerned over certain articles appearing periodically in national publications that present the medical profession in an unfavourable light through misunderstanding or insufficient information on the subject. Future items of this nature will be carefully reviewed, and where applicable, will be answered.

363. The C.M.A. program of public education has been strengthened through its current series of TV one-minute filmettes on three specific health topics: Accidental Poisoning in Childhood; Obesity; and Physical Fitness. The filmettes were sent to some fifty television stations throughout Canada, many of which aired the program as a public service, which financially would have been prohibitive for the C.M.A. if commercial rates were charged. Our third filmette series is now in production, and the subjects chosen are: Scurvy; Medical Interest in Traffic Accidents; and Medicine's Role in Industry.

364. During our PR Workshop Meetings, we could not help but be impressed on hearing about the public educational projects being sponsored by the Divisions. One project in particular should be mentioned as it is of a national nature. I am referring to the medical exposition "Mediscope", which will be featured at the Canadian National Exhibition in Toronto, in August this year. "Mediscope" is sponsored by the Ontario Medical Association, and it is understood that some 1,200 doctors will participate.

365. On being advised that T.C.M.P. is producing a film depicting the features of prepaid medical care, the Committee has offered its support in an advisory capacity. Owing to budget limitations, however, no commitment could be made to provide financial assistance.

MEDICAL-GOVERNMENT RELATIONS

366. For some time, the C.M.A. has recognized the need to keep Federal Members of Parliament and the Senate informed on the profession's attitude toward Medical Services Insurance and other topics of current interest. With this in mind, periodic Information Bulletins have been sent to those concerned. During the past two years we have reviewed such subjects as:

"What is the attitude of the medical profession to Hospital Insurance?"

"Relationship of the C.M.A. to Hospital Services and Personnel."

"The C.M.A. Statement on Medical Services Insurance", and

"Medical Licensure in Canada", is currently being studied for a possible future bulletin.

PUBLIC RELATIONS COMMITTEE MEETING—

APRIL 7-8, 1961

Recommendations of the Committee:

1. THAT the C.M.A. continue its current program of distributing "Information Bulletins" on the activities, opinions and policies of organized medicine to:
Federal Members of Parliament—officials of national departments of health—and key opinion leaders.
2. THAT the C.M.A. continue its program of public education and produce three more one-minute TV filmettes on specific health subjects.
3. THAT the C.M.A. and the Divisions of the C.M.A. continue the present program to interest secondary school students in medicine as a career.
4. THAT the basic activities of the Committee on Public Relations be continued.
5. THAT the Committee on Public Relations continue its efforts to co-ordinate and integrate public relations activities on a National and Divisional level through a Public Relations Workshop in the fall and a National Public Relations Committee Meeting in the spring.
6. THAT the Committee on Public Relations recognizes the duties that will be involved in relationship to the Royal Commission and special attention will be focused in that direction.

367. This meeting of General Council completes for me a three-year term of office as your Chairman of the Committee on Public Relations, and completes the assignment of the present Nucleus Committee.

368. May I express to the members of my Nucleus Committee and to the Divisional Representatives, my sincere appreciation for the time and effort which they have extended in the past three years as members of this Committee. Not only my own thanks, but those of the Committee are also extended to our Secretary, Mr. Kenneth C. Cross, who commenced his duties as the Secretary of Public Relations for The Canadian Medical Association at approximately the same time that the present Committee came into being. Without his constant assistance and untiring effort, we could not have accomplished what we feel we have accomplished in the past three years. We also wish to convey our thanks to the PR staff of the C.M.A. for their efforts.

369. To Dr. A. D. Kelly, the members of the Secretariat and the Executive Committee, we extend our appreciation of their kindness and tolerance.

All of which is respectfully submitted.

EVERETT F. CRUTCHLOW,
Chairman.

Personnel of the Committee:

Nucleus:

Dr. E. F. Crutchlow, Montreal (Chairman).

Advisory:

Dr. L. Stevenson, Montreal
Dr. W. Storrar, Montreal
Dr. R. Dufresne, Montreal

Members:

Dr. J. B. I. Sutherland, Montreal
Dr. G. W. Halpenny, Montreal
Dr. N. Belliveau, Montreal
Dr. T. Hale, Montreal
Mr. K. C. Cross, Toronto (ex officio)
Mr. J. M. Denault, Montreal (ex officio)

Divisional Representatives:

Dr. W. G. McClure, Mission
Dr. E. Poulsen, Lethbridge
Dr. N. Smith, Regina
Dr. R. H. McFarlane, Winnipeg
Dr. T. E. Currier, Peterborough
Dr. T. Hale, Montreal
Dr. M. Turcotte, Quebec
Dr. Eli Davis, Saint John
Dr. F. A. G. Dunswoth, Halifax
Dr. L. Killorn, Charlottetown
Dr. J. G. Williams, St. John's

*Moved by Dr. E. F. Crutchlow,
seconded by Dr. T. J. Quintin,*

*that the Report of the Committee on Public Relations
be adopted.*

Carried

REPORT OF THE COMMITTEE ON APPROVAL OF SCHOOLS FOR RADIOLOGICAL TECHNICIANS

Mr. Chairman and Members of the General Council:

370. Since the last report to The Canadian Medical Association, this Committee has had two two-day meetings, one being held in June, 1960, in Calgary, and another in January, 1961, at Saint John, New Brunswick. It has been necessary for this Committee to be very active, not only during rather prolonged and exhausting meetings, but also by means of a lively and voluminous correspondence in the intervals. The Committee, during and between its meetings, has benefited greatly from the advice of the Joint Council on Technical Training, which consists of radiologists and technicians from the Canadian Association of Radiologists and the Canadian Society of Radiological Technicians respectively.

371. The great bulk of the work of evaluating the questionnaire applications for training school approval has now been completed for the first time. In all, 111 training school applications have been evaluated. 74 schools have been granted "full approval" for x-ray training in diagnostic technique, and an additional 22 schools have been given "provisional approval" (or "interim approval"). There are 12 schools which have been fully approved for training in x-ray therapeutic technique. Three applications for approval have been turned down.

372. The schools which have been granted provisional approval are to submit further applications within not more than two years, for re-evaluation when certain specified deficiencies have been corrected. The schools which have been given "full approval" are to be allowed to carry on for up to four years without further evaluation. The majority of these too have been advised of some minor deficiencies in their training program, and recommendations have been made for improvement. The relatively small number of schools which have been

turned down completely does not indicate that standards are low, but is a reflection of the fact that a considerable number of inadequate schools have voluntarily abandoned training. Their directors felt that they could not properly live up to the basic requirements, and so they have been honest and conscientious enough to terminate their training program. This is probably as it should be, and a reduction in the rather inadequate schools will result in a better average level of training throughout the country. In view of the fact that there does not appear to be any great shortage of x-ray technicians at present (in some areas there has been a temporary surplus during the past year), this development does not appear to be creating any hardship.

373. It is quite evident from the definite increase in the percentage of success in examinations of candidates for the R.T. during the past year, that the program of training school approval has already resulted in a considerable improvement in the level of training being given. Some members of this Committee have personal knowledge of many places where the students are undoubtedly getting more and better lectures, and where there is much stricter adherence to the curriculum than has been the case heretofore.

374. The members of the Committee are only too well aware of the weakness inherent in relying upon answers to a questionnaire for evaluation of training schools, and are looking forward to the time when it will be possible to make personal inspections of the departments where training is being given. Until this can be done, there are certain to be some inequities in evaluation.

375. In the immediate future the Committee will continue to deal with new applications for approval (probably a small number), re-application from schools which have been given "provisional approval", and have subsequently rectified the noted deficiencies, and, within the next four years, a review of all those who have been granted "full approval". At the time of composition of this report, the list of approved schools was being forwarded for early publication in the following journals: the Canadian Medical Association Journal, the Journal of the Canadian Association of Radiologists, the Focal Spot (the Journal of the C.S.R.T.), and the Canadian Hospital Directory. X-ray training is still being given in some schools which are not on this approved list, but it is expected that within a very few years, the C.S.R.T. will make a mandatory requirement that examination candidates come from approved schools only.

376. It is recommended that the following additions be made to the appropriate sections of the Basis of Approval of Schools for Training Radiological Technicians:

1. That "and his personal participation in at least some of the lectures and demonstrations is desirable" be added to the 5th line on page 9 after the word "program" to read: "The radiologist is responsible for the conduct of the training program and his personal participation in at least some of the lectures and demonstrations is desirable".
2. That the following requirements for reappraisal of training schools be approved:
"For renewal of Full Approval a Training School must have been in operation for five years, and in the three years immediately preceding review, 70% of the candidates presenting themselves for examination by the Canadian Society of Radiological Technicians must be successful at the first sitting. In the case of a

Provisionally Approved School the same proviso with regard to examinations must be fulfilled before Full Approval may be granted."

Some discussion arose as to the figure of 70% mentioned in Section 2 and the following amendment was suggested:

"That the C.M.A. recommend to this Committee that it consider altering the said figure."

On a vote, this amendment was not adopted.

377. I would like to pay tribute to the work of Dr. E. A. Petrie, under whose Chairmanship the great majority of the work of this relatively new Committee has been done, and to thank all the members of the Committee for their energetic application to what has been a very time-consuming but not unrewarding task. Dr. A. F. W. Peart and his secretarial assistants have handled very ably a large volume of documents and correspondence. The members of the Joint Council on Technical Training and in particular, Miss Nan Plowman, the secretary of the Joint Council, have contributed immeasurably to the functioning of this Committee.

378. During the past year, we have regretfully accepted the resignation of Dr. J. L. Bouchard, who has been beset with a multitude of other duties. Dr. Bouchard's special knowledge and diplomatic finesse have been great assets to us during the critical early stages of operation of this Committee. Dr. R. J. Walton of Winnipeg has indicated his willingness to accept the Committee's nomination for the vacancy thus created.

All of which is respectfully submitted.

J. G. STAPLETON,
Chairman.

Personnel of the Committee:

Dr. J. G. Stapleton, Hamilton (Chairman)
Dr. Guillaume Gill, Montreal
Dr. D. G. Wollin, Kingston
Dr. E. W. Spencer, Saskatoon
Dr. J. D. Stevenson, Vancouver
Dr. R. J. Walton, Winnipeg

(This report was presented by Dr. G. Gill.)

*Moved by Dr. F. A. Dunsworth,
seconded by Dr. T. J. Quintin,*

*that the Report of the Committee on Approval of
Schools for Radiological Technicians be adopted.*
Carried

REPORT OF THE COMMITTEE ON REHABILITATION

Mr. Chairman and Members of the General Council:

379. In view of the importance and national significance of certain basic problems encountered in the field of rehabilitation, The Canadian Medical Association was requested to convene a general meeting of the Committee on Rehabilitation and this was held at C.M.A. House, in Toronto, on February 13th and 14th, 1961. On special invitation, Dr. K. C. Charron, Director of Health Services, Department of National Health & Welfare, and Dr. B. Primeau, Consultant, Medical Rehabilitation & Disability Advisory Service, Department of National Health & Welfare, attended the meeting.

380. The Committee on Rehabilitation resolved to submit the following recommendations:

- (a) In view of the changing demand for rehabilitation services and the acute shortage of therapists in Canada, it is recommended to the General Council, that schools of physical and/or occupational therapy consider a revision of their goals of training with a view to the standardization and improvement of teaching methods; and that facilities for training of such personnel be increased in the light of the present problems and new goals.
- (b) It is recommended that The Canadian Medical Association request the Department of National Health and Welfare and other agencies providing grants for professional training to supply more extensive bursaries for the training of teachers and clinical instructors in physical and occupational therapy.

381. It is recommended that The Canadian Medical Association communicate with the Association of Canadian Medical Colleges and draw attention to section 4 of the Statement on Rehabilitation adopted by the General Council in June 1955; and that Divisional Committees on Rehabilitation be urged to take this up with the medical colleges in their areas.

Section 4 of the Statement is as follows:

"To prepare the profession to assume its primary responsibility, doctors require education in the total process of rehabilitation. Such training as is necessary must be forthcoming from the medical schools, and to this end there should be developed rehabilitation units in teaching hospitals or in separate rehabilitation centres, whereby the members of the profession will acquire the necessary skills. This must include integration of the efforts of the various auxiliary workers who are rightfully members of the team. These clinical centres will serve to indoctrinate students and will provide physicians and surgeons, nurses, physical and occupational therapists, psychologists, social workers, vocational counsellors, educationalists and others with the necessary competence, through experience and training. These expert professional workers will thus become available to staff the rehabilitation units in hospitals or other centres which must develop in every community in order that the rehabilitation needs of our citizens may be met. They will also be able to focus public interest on the need for, and the availability of, rehabilitative services in their respective areas".

382. It is recommended that The Canadian Medical Association communicate with the College of General Practice of Canada, drawing attention to the importance of rehabilitation, and suggesting that this special field be considered for inclusion in residency training programs and refresher courses endorsed or sponsored by the College.

383. Because of the variation in standards of training in physical medicine and rehabilitation in various countries, and in order to maintain adequate standards in this specialty in Canada, it is recommended that applicants for positions in this specialty be considered in the light of our Canadian standards; and that prospective employers in Canada make use of appropriate Canadian advisors in selecting candidates in this field.

384. It is recommended that The Canadian Medical Association communicate with its Divisions and request

that they inform their respective Provincial Governments of the concern of the Committee on Rehabilitation regarding the relative shortage and future needs of physiatrists, physical and occupational therapists and other personnel required in rehabilitation programs; and that they urge the Provincial Governments to take every possible step to encourage the training of such personnel, in co-operation with the medical societies and universities in their areas.

385. It is recommended that The Canadian Medical Association approach the Department of National Health and Welfare and suggest that a survey be carried out to determine the relative need for occupational therapists in Canada, and where and how they might best be trained. It was suggested that such a study would indicate whether or not it is advisable to continue with the combined training. It was also suggested that the Committee be informed and consulted from time to time on this subject.

It was suggested that in view of the terms of reference of the Royal Commission on Health Services, the recommendation in Section 385 was not now necessary.

*Moved by Dr. S. C. Best,
seconded by Dr. P. Bruce-Lockhart,
that Section 385 be deleted.*

Carried

386. A Canadian Conference on Physiotherapy was held in Toronto on May 1, 1961, under the joint sponsorship of the Association of Canadian Medical Colleges, the Canadian Physiotherapy Association and the Canadian Association of Physical Medicine and Rehabilitation. The objects of the Conference were to evaluate the present shortage of physiotherapists and to forecast the number required for the next decade. The Committee on Rehabilitation endorsed the Conference and recommended that its Chairman attend the meeting.

387. The meeting of the Committee on Rehabilitation of The Canadian Medical Association proved very profitable to all those in attendance. Its conclusions will provide considerable assistance in the planning, promoting and standardization of the rehabilitation efforts throughout the various Divisions. Necessary action will be taken to ensure the early implementation of the Committee's resolutions. The accreditation of schools of Physical and/or Occupational Therapy approved last year by the General Council has now been implemented, and it is hoped that concrete results may be reported at the next meeting of General Council.

388. In view of the foregoing and the necessity of immediate study of the role of Physical Medicine and Rehabilitation in relation to Hospital Insurance, it is hoped that it will be possible to hold another Committee meeting next year.

All of which is respectfully submitted.

G. GINGRAS,
Chairman.

*Personnel of the Committee:
Divisional Representatives:*

Dr. G. Gingras, Montreal, (Chairman)
Dr. B. M. Fahrni, Vancouver
Dr. J. R. Fowler, Edmonton
Dr. A. E. Buckwold, Saskatoon
Dr. F. H. Smith, Winnipeg
Dr. J. S. Crawford, Jr., Toronto
Dr. L. E. Bashow, Fredericton
Dr. A. H. Shears, Halifax
Dr. T. A. Laidlaw, Charlottetown
Dr. B. C. McCann, St. John's

*Moved by Dr. G. Gingras,
seconded by Dr. F. A. Dunsworth,*

*that the Report of the Committee on Rehabilitation
as amended be adopted.*

Carried

REPORT OF THE COMMITTEE ON THE MEDICAL ASPECTS OF TRAFFIC ACCIDENTS

Mr. Chairman and Members of the General Council:

389. This Committee has had another active year and some progress has been made.

390. The recommendations passed by General Council in June, 1960, formed the groundwork, not only of the C.M.A. Committee, but also of the Provincial Committees.

391. The Nucleus Committee met several times and the whole Committee met in Ottawa on March, 17 and 18.

392. The Provincial Representatives reported on their activities, and it will be seen that some worthwhile results were achieved.

393. In Nova Scotia a Medical Advisory Committee is being set up to work with the Motor Vehicle Registrar. A research study based on Provincial statistics is to be made by a medical student and an engineer.

394. In Quebec a two-year survey of traffic accidents in Montreal is nearing completion.

395. The report of the twelve months' study of accidents in the Cornwall, Ontario, area was presented by Dr. Lorne Caldwell. This appeared in the March issue of the Ontario Medical Review. This report has been approved by the Board of Directors of the O.M.A. and forwarded to the Provincial Government for study. It contained much factual information and several important recommendations. The O.M.A. Committee is collaborating with the Provincial Licensing Authority and its Medical Advisory Committee on a Medical Standards Guide.

396. In Manitoba a Medical Advisory Committee to the Licensing Authority has been appointed. A special form for the examination of drunken drivers has been prepared.

397. Following a survey of ambulance services, regulations are being drafted for training of ambulance drivers, equipment of vehicles, and traffic regulations.

398. The Manitoba Police Department is considering a new form for completion at the time of an accident, to be used for research purposes.

399. In Saskatchewan close liaison has been maintained with the Saskatchewan Highway Safety Council. One-day courses for ambulance operators are held annually alternately in Saskatoon and Regina. Driver Education Courses are subsidized at the rate of \$30 per pupil through the Provincial Safety Council with funds supplied by the Government Insurance Office.

400. In Alberta a Medical Advisory Board to the Licensing Authority has been appointed by the College of Physicians and Surgeons. All expenses are paid by the Department of Highways.

401. In British Columbia the Medical Standards Guide adopted a year ago has been found helpful by practising physicians. The Canadian Ophthalmological Standards, approved by the C.M.A. have been adopted. Recommendations have been made to Government regarding standards of minimal ambulance equipment, training ambulance drivers, speed limits, and use of sirens.

402. A thorough study was made by a special committee of the problem of alcohol and driving and report with recommendations forwarded by the B.C. Division to the Federal Government.

403. Statistics compiled by the Canadian Highway Safety Council revealed an upward trend in 1960. During the year, 3,273 were killed (+1.3%); 90,152 were injured (+6.7%); property damage accidents 183,831 (+1%), and total highway accidents 247,629 (+2.14%). The increase in traffic injuries by 5,707 over 1959, must be of special concern to the medical profession.

404. The close liaison between the C.M.A. and the Canadian Highway Safety Council was strengthened by our membership in the C.H.S.C. This was a source of encouragement to the Executive of the Canadian Highway Safety Council. Three doctors of the Canadian Highway Safety Council's Medical Advisory Committee also serve on the C.M.A. Committee. This facilitates free exchange of information.

405. Your Committee makes the following recommendations:

MEDICAL EXAMINATIONS FOR DRIVER FITNESS

406. Physicians should support provincial licensing authorities and should perform medical examinations in connection with driver fitness at the request of these authorities or individual applicants. The physician should obtain signed authorization from the applicant before forwarding reports of medical examinations to the licensing authorities.

SAFETY DEVICES

407. The Committee wishes to commend the automobile industry on its announced plan to install standard brackets for seat belts on all vehicles and would encourage the industry to intensify its research into the structural and functional design of motor vehicles with safety as a primary objective.

DRIVER EDUCATION

408. We again commend driver education of High School students as an extra-curricular activity.

ALCOHOL AND DRIVING

409. As much scientific evidence has shown conclusively the increasing role of alcohol as an important factor in the cause of traffic accidents, the C.M.A. through its national and provincial organizations should advise the federal and provincial governments that it is unsafe for most persons to drive a motor vehicle with a blood alcohol level of 0.05% and for all persons at a level of 0.10%, and suggests that governments take necessary steps to utilize these standards in their law enforcement procedures.

410. The Committee recognizes further, that the breathalyzer test, carried out by properly trained technicians, is an accurate method of determining blood

alcohol levels, and recommends that the C.M.A. and its Divisions also bring this procedure to the attention of the federal and provincial governments and recommends that this test be used as a practical means of measuring blood alcohol in drivers of motor vehicles.

AMBULANCE SERVICES

411. As a result of the report of the Cornwall Study on Ambulance Services, carried out by the Ontario Division, the following recommendations are submitted for approval:

- (a) That provision be made for proper compensation of ambulance operators for traffic emergency services.
- (b) That legislation at the provincial level be enacted to govern the licensing, staffing and equipping and general operations of ambulances.
- (c) That such legislation recognize that ambulance services are dual in nature, and provide not only transportation for the injured but also first aid. As para-medical services, ambulances should operate under medical supervision.
- (d) That regulations must be evolved to guarantee the adequate training and certification of ambulance attendants with due emphasis upon periodic refresher courses and recertification to ensure continuing familiarity with, and competence in, accepted techniques.
- (e) That provision be made for the co-ordination of communications' services throughout the provinces in order that the facilities of police, ambulance services, hospitals and physicians, may be utilized to the maximum advantage of all concerned, particularly the accident victim.

412. The Committee suggests that recommendations approved by the General Council should be presented by the Divisional Committees to their respective Divisions for submission to provincial governments for consideration and legislation. The recommendations should also be forwarded to the Canadian Highway Safety Council for distribution to its members and the public.

413. Finally the Committee recommends that the next meeting be held in 1963, possibly at the time of the Safety Workshops of the Ontario Department of Transport. In the meantime, Divisional Committees and the Nucleus Committee will continue to work actively in the problem of traffic accidents.

All of which is respectfully submitted.

WALLACE TROUP,
Chairman

Personnel of the Committee: Nucleus:

Dr. Wallace Troup, Ottawa (Chairman)
Dr. Howard Bagnall, Ottawa
Dr. W. Arthur Blair, Ottawa
Dr. G. David Hooper, Ottawa
Dr. J. Ian Jeffrey, Ottawa
Dr. David Kubryk, Ottawa
Dr. Stanley Mercer, Ottawa
Dr. S. Y. Shirley, Ottawa
Dr. Donald A. Young, Ottawa
Dr. Lorne A. Caldwell, Cornwall

Divisional Representatives:

Dr. R. M. Peet, Victoria
Dr. W. F. M. Hall, Edmonton

Dr. C. H. Andrews, Prince Albert
Dr. N. C. Hill, Winnipeg
Dr. O. F. Beamish, Kemptville
Dr. C. W. MacMillan, Montreal
Dr. J. K. L. Irwin, Charlottetown
Dr. E. L. White, Bathurst
Dr. G. J. H. Colwell, Halifax
Dr. D. L. Sutherland, St. John's

Dr. Troup on behalf of the Committee expressed appreciation for the assistance rendered by Dr. A. F. W. Peart, in the various activities undertaken during the past year.

*Moved by Dr. Wallace Troup,
seconded by Dr. T. J. Quintin,*

that the Report of the Committee on the Medical Aspects of Traffic Accidents be adopted.

Carried

Past chairmen of General Council

*Moved by Dr. Wm. Bramley-Moore,
seconded by Dr. Glenn Sawyer,*

that the Committee on Constitution and By-laws be instructed to prepare and introduce at the earliest possible date an amendment to the Constitution to provide that Past Chairmen of General Council shall be members of General Council on the same terms and conditions as Past Presidents.

Carried

Deputy Chairman of General Council

On motion of Dr. N. H. Gosse, it was unanimously approved:

that General Council recommend to the Executive Committee that it give consideration to the setting up in the C.M.A. the position of Deputy Chairman of General Council, such appointment to be made annually.

Dr. M. S. Douglas expressed his appreciation of the kindness and cooperation accorded him during his term of office as Chairman of the General Council. He said it had been a notable experience to travel across Canada and to visit the Divisions of the C.M.A. in company with Dr. Quintin, Dr. Thomson and Mr. Freamo. He assured the members of General Council that in choosing Dr. Quintin as his successor they had chosen wisely, and asked that the same cooperation be given to the new Chairman of Council as he had received during his term.

*Moved by Dr. A. F. VanWart,
seconded by Dr. R. K. Thomson,*

that a suitable resolution be incorporated in the Minutes of General Council expressing appreciation of the services rendered by Dr. M. S. Douglas to this Council.

Carried unanimously

*Moved by Dr. M. S. Douglas,
seconded by Dr. R. M. Parsons,*

that any further business arising out of this meeting be referred to the Executive Committee.

ADJOURNMENT

The meeting of General Council adjourned at 12.30 p.m. Wednesday, June 21, 1961.

THE CANADIAN MEDICAL ASSOCIATION LE JOURNAL DE L'ASSOCIATION MÉDICALE CANADIENNE

SEPTEMBER 2, 1961 • VOL. 85, NO. 10

LIVE ORAL POLIOVIRUS VACCINE AFTER DPT POLIO VACCINE*

J. C. WILT, M.D., W. L. PARKER, M.D.,
W. STACKIW, B.Sc., and
P. A. HUTCHISON, M.D., Winnipeg, Man.

SINCE THE use of Salk poliomyelitis vaccine in the field trials of 1954,¹ many pre-school and school age children have been effectively immunized against poliomyelitis: extension of the use of the vaccine into younger age groups met with some resistance, since it meant the introduction of an additional immunizing schedule. For this reason, investigations were started about 1956 to determine the feasibility of combining the Salk poliomyelitis vaccine with diphtheria, pertussis and tetanus (DPT) vaccine, which was an already established polyvalent immunizing agent. This combination of DPT with poliomyelitis (DPTP) vaccine was effective and produced few side reactions in children, but in order for the pertussis component to be of value, the vaccine had to be started at 3 months of age or less; while infants responded well to the DPT components at this age, some investigators have reported significant failure rates to the poliovirus components and recommend that the poliovirus vaccine be started at an older age, e.g. six or nine months.²⁻⁴ Other investigators have reported a fairly good response to the poliovirus antigens in infants under seven months of age and consider that deficiencies in response can be corrected by giving an additional dose in the primary series or an extra booster dose.⁵⁻⁹

An occasional untoward reaction occurs when DPTP vaccine is administered to children over six years of age; since most of these reactions are attributable to the pertussis component and to a lesser extent to the diphtheria component, the use of DTP (diphtheria, tetanus, poliomyelitis) vaccine is recommended for children over six years of age. A TP (tetanus, poliomyelitis) vaccine is available for adults over 18 years of age, since quite a high proportion of adults react to diphtheria toxoid.

Our primary objectives in this study were first to test the effectiveness of DPTP vaccine in producing circulating poliovirus antibodies in infants, and secondly, to test the effectiveness of live oral poliovirus vaccine in producing circulating antibodies in infants who failed to produce antibodies to the DPTP vaccine. Other studies comparing the nature of the response to the two different vaccines will be the subject of a later report.

PROCEDURE

The project is outlined in Table I with the approximate intervals between each step. The average age of the infants at the time of the first dose of DPTP vaccine was four months. One hundred and ninety-eight children completed this schedule of injections. The first blood sample was collected

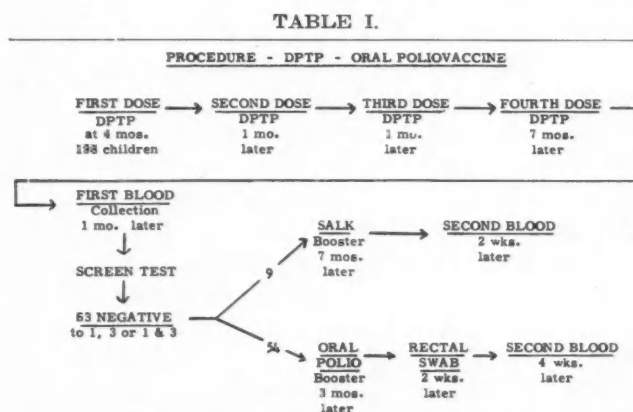


Table I.—Schematic representation of sequential stages of the project showing approximate time intervals between each step.

one month later. The screen test on these 198 blood samples was carried out against the type 1 and type 3 viruses; 63 children did not have antibodies at the 1:10 dilution to type 1 or type 3 or both. The parents of 54 of the 63 children consented to have their children fed the live oral vaccine (Sabin). Those children who failed to develop antibody to type 1 were fed type 1, those who failed to develop antibody to type 3 were fed type 3, and those who failed to develop antibodies to types 1 and 3 were fed types 1 and 3 simultaneously. The type 1 virus was fed in a concentration of $10^{5.5}$, the type 3 at 10^5 , each in a volume of 1 ml. The stock vaccine was titrated and made up to proper dilution in

*From the Department of Bacteriology and Immunology and the Department of Pediatrics, Medical Faculty, The University of Manitoba. This investigation was considered and approved by the Canadian National Technical Advisory Committee on Live Poliovirus Vaccines, and was supported by the Connaught Medical Research Laboratories.

sucrose as required. The vaccine was administered into the mouth by means of a silicated dropper. Surveillance was maintained on all children for six weeks after the feeding by the pediatrician attached to the project; no untoward reactions occurred.

The parents of nine of the 63 children did not consent to have their children fed; these children were given a dose of Salk poliomyelitis vaccine, and a blood sample was collected two weeks later.

Standard techniques were used; monkey kidney cells were supplied by the Connaught Medical Research Laboratories for all neutralization tests. The initial screen test was carried out at three dilutions, 1:10, 1:80 and 1:320, each dilution being examined in triplicate. The virus serum mixtures were incubated at room temperature for one hour. Readings were made on the second and fourth days for a cytopathic effect. The final titre was expressed as the highest dilution of serum in which two out of three tubes showed no cytopathic effect. After collection of the second serum, the first and second sera were examined in parallel with serial two-fold dilutions from 1:4 to 1:512. Each dilution was again examined in triplicate, with readings on the second and fourth days.

Rectal swabs for isolation of virus were collected in the home 12 to 14 days after feeding the vaccine and transported directly to the laboratory.

RESULTS

Table II shows the results of the screen test on 198 children who were immunized with the DPTP vaccine. Sera which showed a titre of less than 1:10 are referred to as "negative". The sera of 17 children were negative for both types 1 and 3 antibodies; in addition, 25 were negative for type 1 only, making a total of 42 sera which were negative for type 1 antibody. Similarly, 21 sera were negative for type 3 antibody only, making a total of 38 failures to type 3.

TABLE II.—RESULTS OF THE SCREEN TEST AT A 1:10 DILUTION OF SERUM ON 198 CHILDREN IMMUNIZED WITH DPTP

Failures to DPTP Vaccine by Screen Test (Titre < 1:10)

198 children were immunized
63 children (31%) were <1:10 to type 1 or 3 or 1 and 3
25 (13%) were <1:10 to type 1 only
21 (11%) were <1:10 type 3 only
17 (9%) were <1:10 to types 1 and 3
54 children (27%) <1:10 to type 1 or 3 or 1 and 3 were fed
21 (10%) were <1:10 to type 1 only—were fed type 1
18 (9%) were <1:10 to type 3 only—were fed type 3
15 (8%) were <1:10 to types 1 and 3—were fed types 1 and 3

Some children who did not have antibodies at the 1:10 dilution in the first serum did have antibodies at the 1:4 or 1:8 dilution in the final serial dilution test. Of the 42 children who were negative at the 1:10 dilution to type 1, 30 were also negative at 1:4 and 10 were negative at 1:8. Of the 38 children negative at the 1:10 dilution to type 3, 25

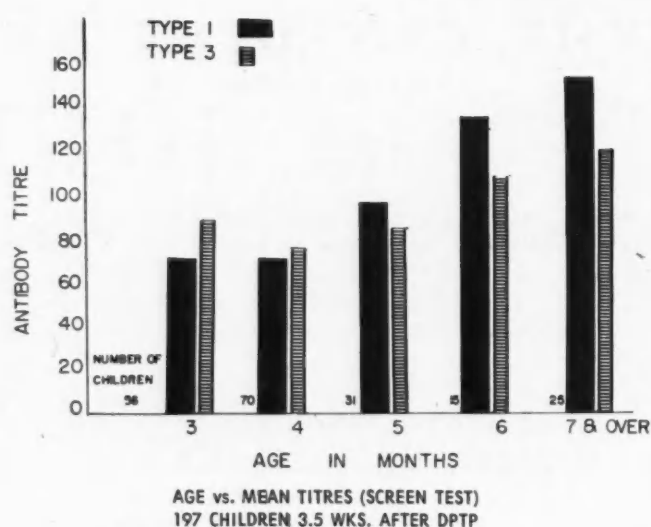


Fig. 1.—Children who started DPTP at an older age produced higher titres of circulating antibodies.

were also negative at 1:4 and 7 were negative at 1:8.

Fig. 1 shows the mean titre of antibodies in the first blood specimen of 197 children one month after receiving the DPTP vaccine, as encountered in the different age groups. One child not included here was newborn. The age indicated is at the time of the first dose of DPTP vaccine. The figure shows that the children who started the vaccine at an older age produced a higher titre of circulating antibodies than children who started at a younger age.

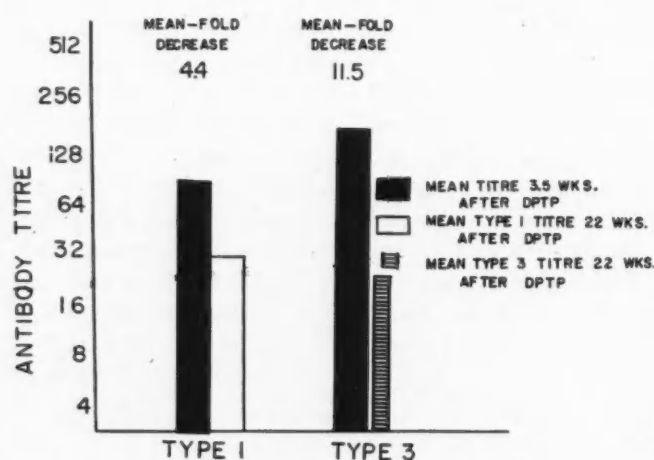


Fig. 2.—The antibody decrease in 39 children who did not respond to the initial DPTP series (18 to type 1 and 21 to type 3).

Fig. 2 illustrates the results of a study of 39 of the 54 children who did respond to the type 1 or type 3 component of the DPTP vaccine. The first bar of each pair shows the mean titre of antibodies about one month after the last dose of DPTP vaccine; the second bar, the mean titre about five months later. The figure shows the natural fall-off in antibodies during this interval. The mean-fold decrease is a mean of the fold-fall between the first and second serum samples of each child included in the group. There was a better response

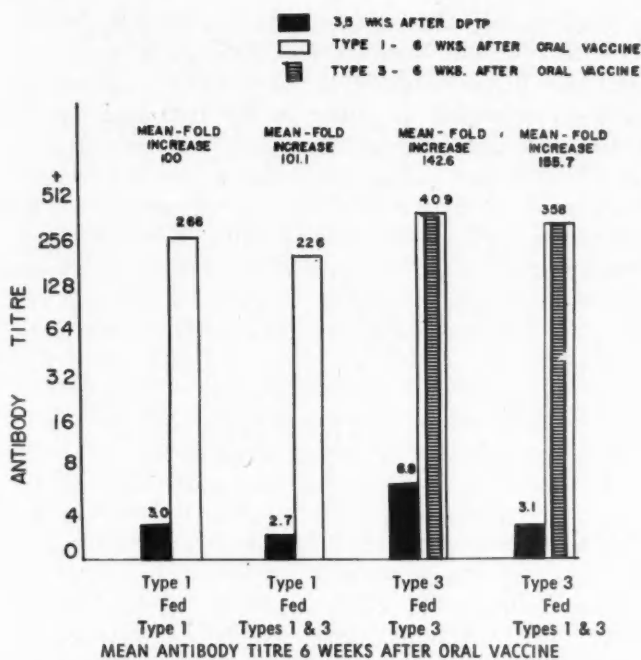


Fig. 3.—The antibody increase after feeding live vaccine to 54 children who did not produce circulating antibodies to type 1 or 3 or both with DTP.

to the type 3 component of the DTP vaccine than to the type 1, and a somewhat greater fall-off in its titre during the course of five months. Such a fall-off should be taken into account in judging the effectiveness of any poliomyelitis vaccine given during the interval.

Fig. 3 shows the results of the antibody studies of those children who were negative to type 1 or type 3 or both and were fed the type or types to which they were deficient. The first bar of each pair shows the mean titre of the first serum specimen about one month after completion of the DTP vaccine. The second bar of each pair represents the mean titre of each group about six weeks after feeding the oral vaccine. The mean-fold increase is a mean of the fold increase between the first and second serum samples of each child in the group. In each case there is a good response to the type

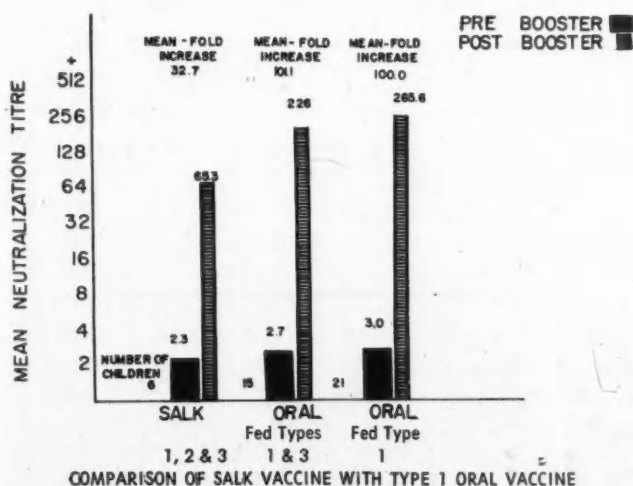


Fig. 4.—This is a comparison of the type 1 antibody response of children who received Salk vaccine with children who received types 1 and 3 oral vaccine and with children who received type 1 oral vaccine.

fed, the response to type 3 being somewhat better than the response to type 1. There would seem to be no inhibition in response when the two types are fed together.

A type 1 virus was isolated from the rectal swab of 12 of the 21 children fed type 1 vaccine, and a type 3 virus from 17 of the 18 fed type 3. From 12 of the 15 children fed types 1 and 3, a type 3 virus only was recovered; both types 1 and 3 were isolated from only one of these 15 children. Only two children failed to produce antibodies; both had been fed type 1 virus. The rectal swab from both children was negative. One of these two children was found to have a hypogammaglobulinemia on electrophoretic examination of serum.

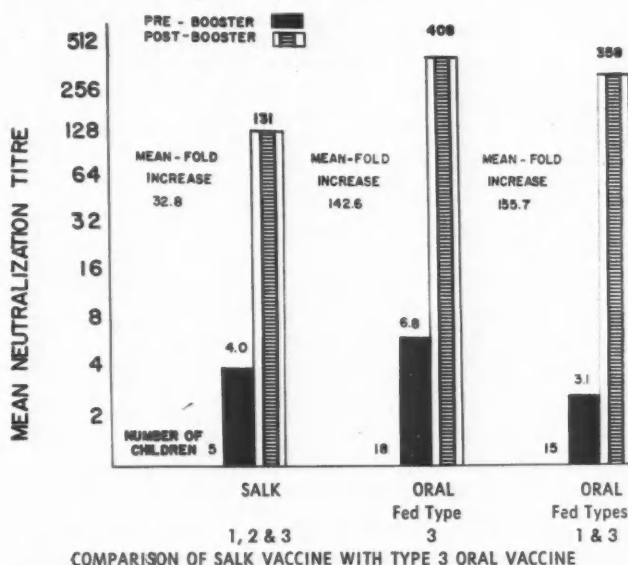


Fig. 5.—This figure compares the type 3 antibody response of children who received Salk vaccine with children who received types 1 and 3 oral vaccine and children who received type 3 oral vaccine.

Fig. 4 compares the type 1 booster effect of Salk vaccine with that of the type 1 oral vaccine, in children who failed to respond to the type 1 component of the DTP vaccine. Fig. 5 is a similar comparison of the type 3 booster effect of Salk and oral vaccine in children who failed to respond to the type 3 component of the DTP vaccine. Examination of the apparent better response to the oral vaccine, by the method of exact probability, shows no significant difference at the 5% level for type 1 but a highly significant difference for type 3.

DISCUSSION

This investigation was carried out over the winter months in order to avoid the possibility of interference effects of wild enteroviruses. The scarcity of enteroviruses during this period has been indicated by information from three sources. First, there have been few enteroviruses isolated in the diagnostic laboratory. Secondly, we have been conducting a survey over the past two years on the incidence of viruses as an etiologic agent in the diarrhea of infants. Thirdly, sewage has been sub-

mitted from various points in the city of Winnipeg over a two-year period to the Connaught Medical Research Laboratories for isolation of enteroviruses. These studies indicate that during the period of the project and for two months prior to the investigation, enteroviruses were scarce in the community concerned.

This project was concerned only with type 1 and type 3 antigens and antibodies; the type 2 antigen was not fed, since it tends to increase the level of type 1 and 3 antibodies in children previously sensitized to types 1 and 3.

No attempt has been made here to determine the reasons for the failure to respond to the DPTP vaccine in the younger age groups. Failures have been attributed to vaccines of insufficient potency and occur most often to the type 1 component;⁵ there is some disagreement as to which type 1 strain is the most antigenic, the Brunenders or the Mahoney.^{3, 5} Some investigators have used a dose of 0.5 ml. of DPTP vaccine in the place of the usual 1-ml. dose in children under 3 or 4 months of age;⁷ this dose is considered to be inadequate. Most investigators believe that passive antibodies play an important part in diminishing the active antibody response;² others have suggested that the failure may be related to immunological immaturity. Many infants respond to one type when they fail to respond to another type following a primary series of injections with the same lot of vaccine; this would seem to exclude immunological immaturity and variations in potency, and make it more likely that passive antibodies are the most important factor. Adults have the highest titre of active antibodies to type 1; also, type 1 occurs in a higher frequency than the other types. Mothers would therefore tend to donate a higher concentration of type 1 antibodies to the infant; in this case the infant would fail to develop antibodies to type 1 more frequently than to the other types. Some investigators have suggested that immunological tolerance may play a part in the failures; there is no experimental evidence to support this theory at the present time.¹⁰ An important factor that must influence the response to the vaccine is the extent of sensitization from previous natural exposures. It would be reasonable to assume that older children would have had more frequent natural exposures that would sensitize antibody-forming mechanisms. It would, however, be difficult to correlate this factor with subsequent response to vaccine.

The comparison which has been made of the effectiveness of the oral and the Salk vaccine as a booster for those children who failed to develop antibodies after administration of the DPTP vaccine does not show a great difference between the two immunizing agents. The number of children who were given the Salk vaccine as a booster was very small, however. The series should be enlarged, since this is an important practical problem.

Studies with the complement fixation test as well as with zone and immuno-electrophoresis were carried out in an attempt to show other differences in the serological response to the live and inactivated vaccine; these investigations will be reported at a later date. Our preliminary electrophoretic studies have shown that the development of an adequate level of circulating antibodies to either live or inactivated vaccine is associated with the development of a band in the beta-2 globulin region on both zone and immuno-electrophoresis.

SUMMARY

Approximately 20% of infants immunized with DPTP vaccine failed to develop circulating antibodies to type 1 or 3 or types 1 and 3 Poliovirus at a titre of 1:10. A greater proportion of infants in the younger age groups failed than in the older age groups.

All children who failed to respond to the DPTP vaccine responded well to the booster of oral vaccine except two; these two also failed to excrete virus in the feces.

A similar series of children who had failed to respond to the DPTP vaccine were administered a second booster of Salk vaccine and responded well; a larger series would be required for an effective comparison of the two types of vaccine as a booster.

The type 3 virus was more readily isolated from rectal swabs after feeding than was type 1.

The development of circulating antibodies to the poliovirus is associated with the development of a beta-2 globulin band on zone and immuno-electrophoresis.

We wish to express our appreciation to the following for a great deal of assistance during the course of the project: Connaught Medical Research Laboratories, Toronto; the City of Winnipeg Health Department and Public Health Nurses; and the Province of Manitoba Department of Health.

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CHANGE OF ADDRESS

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CLINICAL EXPERIENCE WITH VINBLASTINE SULFATE*

O. H. WARWICK, M.D., R. E. ALISON, M.D.,
and J. M. M. DARTE, M.D., Toronto

FOLLOWING the observations by Cutts, Beer and Noble¹ that extracts of the plant *Vinca rosea* Linn caused leukopenia and marrow depression when injected into rats, a new alkaloid, vincalukoblastine (vinblastine sulfate), was isolated.² This substance also caused marked hematopoietic depression³ and was shown to affect experimental tumours.⁴⁻⁶ The growth-inhibiting effect of this agent in human malignancy has since been described.⁷⁻¹² With the initial dosages used, the main adverse reactions occurred at the sites of injection, on the blood, and on the nervous system. Severe granulocytopenia was noted in almost all patients, although thrombocytopenia was seldom observed. Remissions were reported in acute leukemia, choriocarcinoma, Hodgkin's disease and occasionally in solid tumours.

This is a review of our experience with 120 patients with malignant disease who were treated with vinblastine sulfate between May 1959 and May 1961, and includes the 46 patients previously reported by us.^{9, 12} Two points arise from this study which we consider of particular interest. As used in the treatment of the last 100 patients, vinblastine sulfate has caused few serious side effects and has produced useful remissions in Hodgkin's disease.

Of the 120 patients treated, 31 had Hodgkin's disease, 15 had lymphomas, 20 had leukemia, nine had testicular tumours, four had choriocarcinoma and 41 had miscellaneous solid tumours. In the selection of cases several principles have been followed. In each patient histological proof of diagnosis was available and it was possible to assess objectively any effect of treatment on the disease process. The patients chosen had previously received established forms of therapy to which they were no longer responding favourably; exceptions to this were four patients with Hodgkin's disease who received combined vinblastine and radiation, and four patients whose disease was too generalized for radiation therapy and for whom vinblastine sulfate was felt to offer as much hope of relief as any of the alkylating agents.

The dosage schedule of 0.15 mg. per kg. of vinblastine sulfate intravenously on three or four successive days used in our first 22 cases⁹ was discontinued because of the relatively high incidence of adverse reactions. Since then the patients have received 0.2 mg. per kg. in 10 divided doses of 0.02 mg. per kg. given at hourly or half-hourly intervals into the tubing of an intravenous infusion of 5% glucose in normal saline. As a gen-

eral rule this dose was repeated in seven to ten days if the white cell count had not fallen below or had returned to 3000 per c.mm. or more. Where no response was observed, treatment was discontinued. To 14 of the patients showing objective improvement, maintenance therapy with 0.2 mg. per kg. was given in a single injection at two- to four-week intervals if the white cell count was above 3000 per c.mm.

With this latter dosage schedule few serious toxic effects occurred, although most patients developed a leukopenia of 3000 cells per c.mm. or less. In 19 patients the white cell count fell below 1000 per c.mm.; eight of these had leukemia. Except for those patients whose marrow was extensively involved by disease, the white cell level generally returned to normal within 10 days to two weeks. Seventy-three patients had no adverse reaction other than leukopenia. Local irritation, pain, thrombophlebitis, nausea or fever were noted in 20 cases, although the symptoms were usually mild and transient. Two patients developed temporary partial alopecia and two showed hyperuricemia and hyperuricuria. The development of a *E. coli* septicemia in one patient with acute leukemia might have been related to the treatment with vinblastine sulfate. The agent might also have been a factor in the development of confusion in one patient and convulsions in another.

The effects of vinblastine sulfate in 116 patients with malignant disease are summarized in Table I. The four patients with Hodgkin's disease who received radiation in conjunction with vinblastine sulfate are not included. Beneficial objective effects occurred in 32 patients and no response was noted in 84.

Among the patients with epithelial tumours, one with metastases to the skin from carcinoma of the stomach showed disappearance or diminution in the size of these masses during a two-month period on maintenance therapy. Another patient with carcinoma of the breast showed marked improvement in skin metastases with healing of ulceration, but the remission was maintained for only six weeks.

The patients with Hodgkin's disease will be considered separately from those with other tumours of hematopoietic tissue. Of the patients with leukemia, only those with leukosarcoma and acute stem-cell leukemia improved. A 7-year-old girl with leukosarcoma showed decrease in blast cells in the marrow and reduction in the size of her enlarged liver, spleen and nodes for six weeks after the first course of treatment. A second course produced no response. Two of the nine patients with acute stem-cell leukemia had partial remissions which lasted four and six weeks respectively and were characterized by reduction of blast cells and shrinkage of the spleen, liver and lymph nodes. Two patients had a complete remission for six and eight weeks. The blast cells disappeared from the peripheral blood

*From the Ontario Cancer Institute and the Princess Margaret Hospital, Toronto, and the Department of Medicine, University of Toronto. This project was supported by grants from the Ontario Cancer Treatment and Research Foundation. We wish to thank Eli Lilly and Company for making available the supplies of Velbe (vinblastine sulfate).

TABLE I.—SUMMARY OF EFFECTS OF VINBLASTINE SULFATE
IN MALIGNANT DISEASE

(Following the Etiologic Classification of the Standard Nomenclature of Diseases and Operations)

Disease	No.	No effect	Beneficial objective effect	Duration
<i>Tumours of epithelium—80-81</i>				
Granulosa cell of ovary....	1	1	0	—
Cholangioma.....	1	1	0	—
Stomach.....	1	0	1	2 mos.
Breast.....	4	3	1	6 wks.
Thyroid.....	1	1	0	—
Bladder.....	2	2	0	—
Skin.....	1	1	0	—
Bronchus.....	2	2	0	—
Esophagus.....	1	1	0	—
Vulva.....	1	1	0	—
Cervix.....	1	1	0	—
Melanocarcinoma.....	4	4	0	—
Hypernephroma.....	4	4	0	—
Anaplastic carcinoma.....	1	1	0	—
<i>Tumours of hematopoietic tissue—82-83</i>				
Acute lymphatic leukemia.....	1	1	0	—
Acute granulocytic leukemia.....	7	7	0	—
Chronic granulocytic leukemia.....	2	2	0	—
Leukosarcoma.....	1	0	1	6 wks.
Acute stem cell leukemia.....	9	5	4	4-8 wks.
Lymphosarcoma.....	9	7	2	3-4 wks.
Reticulum cell sarcoma.....	2	1	1	3 mos.
Hodgkin's disease.....	27	11	16	2 wks.-11 mos.
Plasma cell myeloma.....	3	2	1	3 mos.
Giant follicle lymphoma.....	3	2	1	3 mos.
Lymphoma not specified.....	1	0	1	2½ mos.
<i>Tumours of nerve tissue—84</i>				
Neuroepithelioma (neuroblastoma of retina).....	2	2	0	—
Glioblastoma multiforme.....	1	1	0	—
<i>Tumours of vascular tissue—85</i>				
Hemangiosarcoma.....	1	1	0	—
<i>Tumours of smooth muscle—86</i>				
Leiomyosarcoma.....	1	1	0	—
<i>Tumours of connective tissue—87</i>				
Ewing's sarcoma.....	2	2	0	—
Osteogenic sarcoma.....	2	2	0	—
<i>Tumours of embryonal and mixed tissue—88</i>				
Choriocarcinoma.....	4	3	1	6 mos.
Seminoma.....	4	3	1	2 mos.
Teratoma of testis.....	2	1	1	6 wks.
Nephroblastoma (Wilms' tumour).....	2	2	0	—
Embryonal carcinoma of testis.....	3	3	0	—
Thymoma.....	1	1	0	—
Mixed tumour of salivary gland.....	1	1	0	—

and marrow, and the liver, spleen and lymph nodes returned to normal size.

Patients with lymphosarcoma have shown only short remissions. A rapidly progressive reticulum cell sarcoma in one 24-year-old man remained stationary for three months following administration of vinblastine sulfate. Another patient with multiple myeloma of seven years' duration had developed severe anemia, bone pain, loss of appetite and energy. With vinblastine sulfate and small doses of radiation given to localized areas, he gained 21 lb., the hemoglobin was maintained at three g. above the admission level of 5.4 g. % and he returned to part-time work. The improvement had been maintained for three months when he developed an infection and died. One 50-year-

old woman with giant follicle lymphoma showed symptomatic improvement with reduction in the size of enlarged lymph nodes and loss of associated pain for three months. One 20-year-old man with malignant lymphoma is of particular interest because vinblastine sulfate given in 10 divided doses at one-half hour intervals produced a reduction in size of the mass and diminution in pain whereas a single intravenous injection of the same dose previously had not been effective.

None of the tumours of nerve tissue, vascular tissue, smooth muscle or connective tissue responded to treatment.

Of the 17 patients with tumours of embryonal and mixed tissue the administration of vinblastine sulfate produced some response in three. A 21-year-old woman with choriocarcinoma gained 16 lb. in weight, lung metastases disappeared and a temporary fall in urinary chorionic gonadotrophins occurred. This remission lasted six months and she subsequently died of tumour emboli which lodged in the pulmonary arterioles. A 26-year-old man with seminoma had an abdominal mass which disappeared for two months following treatment with vinblastine sulfate.

It became apparent early in our study of this agent that patients with Hodgkin's disease seemed to respond more consistently and more favourably than did those with any of the other diseases treated. Thirty-one patients with advanced Hodgkin's disease have been treated. Four of these are not included in our assessment because the drug was given in combination with radiation therapy. Of the remaining 27, no response was observed in 11 and a favourable response in 16. Four of the remissions were of short duration, lasting two to six weeks. However, 12 of the 27 patients showed a marked improvement for periods ranging from two to 11 months. When a response was obtained in patients with Hodgkin's disease, it was often dramatic. The patient felt better within 24 to 48 hours, and was aware of an improvement in appetite and sense of well-being. The reduction in size of lymph nodes, liver and spleen took place as rapidly as the symptomatic improvement in some cases; in others it occurred more slowly. Weight gain and improvement in anemia accompanied this response. The following case histories illustrate these various points.

CASE 1

L.M., a 45-year-old man, was found to have Hodgkin's disease by biopsy in November 1959. Radiation therapy did not halt the progress of the disease and he was admitted in March 1960 with malaise, sweating, severe chest pain and weight loss of 30 lb. On examination he was cachectic and had fever, enlarged nodes in the left supraclavicular and left axillary areas and a mass in the outer aspect of the left upper arm. Abdominal tenderness precluded an adequate examination. His hemoglobin, white blood count and bone marrow were normal. His chest radiograph showed right hilar adenopathy and a poorly defined lesion in

the right middle lobe. Three days after he received 11 mg. of vinblastine sulfate, the pain and abdominal tenderness had disappeared and the left deltoid mass was smaller. An abdominal mass and enlarged liver could then be felt. After a second injection of vinblastine sulfate one week later, he developed a voracious appetite and by this time only a few small nodes could be felt and the abdominal mass was diminishing. He gained 20 lb. over the next few months. He showed continued improvement on maintenance therapy for eight and one-half months. In November 1960, recurrent lymph node masses did not respond to vinblastine sulfate but became smaller with radiation. In January 1961, he developed acute empyema of the gallbladder and obstructive jaundice due to Hodgkin's disease. Following operation a temporary remission was obtained with nitrogen mustard [methyl-bis (2-chloroethyl) amine] which lasted for four weeks. He died on March 15, 1961, with extensive Hodgkin's disease, obstructive jaundice, pulmonary congestion and atelectasis.

CASE 2

S.L., a 35-year-old man, had Hodgkin's disease which was diagnosed after inguinal node biopsy in 1951, and over the next nine years he received therapy with radiation and nitrogen mustard. In March 1960, he was admitted to hospital with fever, malaise, sore throat, chest pain and vomiting, and was cachectic with high fever, a mass in the left upper abdomen, obstructive jaundice and edema. No beneficial effect was produced by cyclophosphamide [N, N-bis-(B-chlorethyl)-N', O-Propylene phosphoric acid ester diamide monohydrate] and prednisone. He continued to deteriorate, and enlargement of the spleen and abdominal lymph nodes were noted. His hemoglobin was 7.8 g. %. Two days after the administration of 12.5 mg. of vinblastine sulfate in April 1960, vomiting stopped and his temperature subsided, and two weeks later he was free of jaundice and edema. The abdominal mass was no longer palpable and only the tip of the spleen could be felt. When he was seen in June 1960, there were no abnormal physical findings. His hemoglobin had risen to 11 g. % and he had gained 25 lb. Remission continued on vinblastine sulfate for eight months at which time an abdominal mass recurred, with ureteral obstruction. There was a temporary response to radiation therapy but none to alkylating agents. He died in April 1961.

CASE 3

In 1952, P.McK., a 28-year-old man, was found to have Hodgkin's disease which was controlled by radiation until 1959 when he received prednisone and chlorambucil [p(di-2-chloroethyl) amino phenyl butyric acid] without any effect. He was admitted to hospital in June 1960, severely ill with shortness of breath, wheezing, cough, nausea, vomiting and abdominal pain. On examination there were bilateral rhonchi, fullness in the upper abdomen and hepatomegaly to 6 cm. below the right costal margin. The hemogram and chest radiograph were normal. After he received 12 mg. of vinblastine sulfate on June 16 and June 22, his appetite became voracious, his cough improved and his abdominal pain disappeared. No abdominal masses could be felt. Following one further injection of vinblastine sulfate two weeks later, he had a complete remission

for six months and returned to full-time work. At the end of January 1960, he noted general malaise, fever, cough, loss of appetite and night sweats, and lymphadenopathy and hepatomegaly were again found. Vinblastine sulfate, 12 mg., given on January 20 and 27, produced generalized improvement in well-being, and the nodes shrank to half their size. A third injection was given to repeat the previous pattern of drug administration and the nodes disappeared. Remission this time lasted only three months and he has recently received further vinblastine sulfate.

CASE 4

G.R., a 39-year-old man, developed Hodgkin's disease in the fall of 1957. A characteristic fever, fatigue, sweating and lymphadenopathy were controlled initially by wide-field radiation. In April 1959, recurrent symptoms and signs subsided for six months following nitrogen mustard therapy, but only a six-week remission was obtained with a second course of nitrogen mustard. He was admitted in June 1960 with fever, fatigue and enlarged, tender inguinal nodes which produced pain on walking. He also had epigastric pain and a history of duodenal ulcer. On examination he had low-grade fever and moderately enlarged nodes in both inguinal regions. His hemoglobin was 9.7 g. %. He received vinblastine sulfate on June 7 and June 16. The fever and pain subsided and the groin nodes became smaller. He showed gradual improvement, and maintenance therapy was discontinued in November 1960. He has remained well and by May 1961 had gained 9 lb., his hemoglobin had risen to 11 g. % and he had no evidence of active Hodgkin's disease.

CASE 5

Hodgkin's disease was diagnosed in W.P., a 64-year-old man, by biopsy in May 1960, and radiation therapy to the axillae and left groin produced a good result. In July 1960, he required an abdominal paracentesis and his spleen was enlarged 5 cm. below the left costal margin. He was admitted in September 1960, complaining of progressive weakness, shortness of breath and swelling of the ankles. On examination he was acutely ill with pallor, gross ascites and edema of his legs. Following paracentesis the liver was felt below the umbilicus, the spleen tip was palpable and he had a large mass in the left lower quadrant. The hemoglobin was 6.1 g. % but the serum proteins were normal. After paracenteses on two further occasions, vinblastine sulfate, 12 mg., was given intravenously on September 16 and September 23. He also received 3000 c.c. of whole blood. There was an immediate improvement in his appetite and general sense of well-being. Following one further paracentesis in October, ascites and edema did not recur, and the liver, spleen and abdominal mass could no longer be felt. He has continued on maintenance therapy every three to four weeks. In June 1961 he was well, his hemoglobin was 12.1 g. % and he had gained 25 lb. The remarkable remission obtained in this patient has continued for nine months (Fig. 1).

CASE 6

V.Mc., a 43-year-old man, was admitted to hospital in January 1960, complaining of anorexia, malaise and fatigue. On examination he had pallor with enlarged

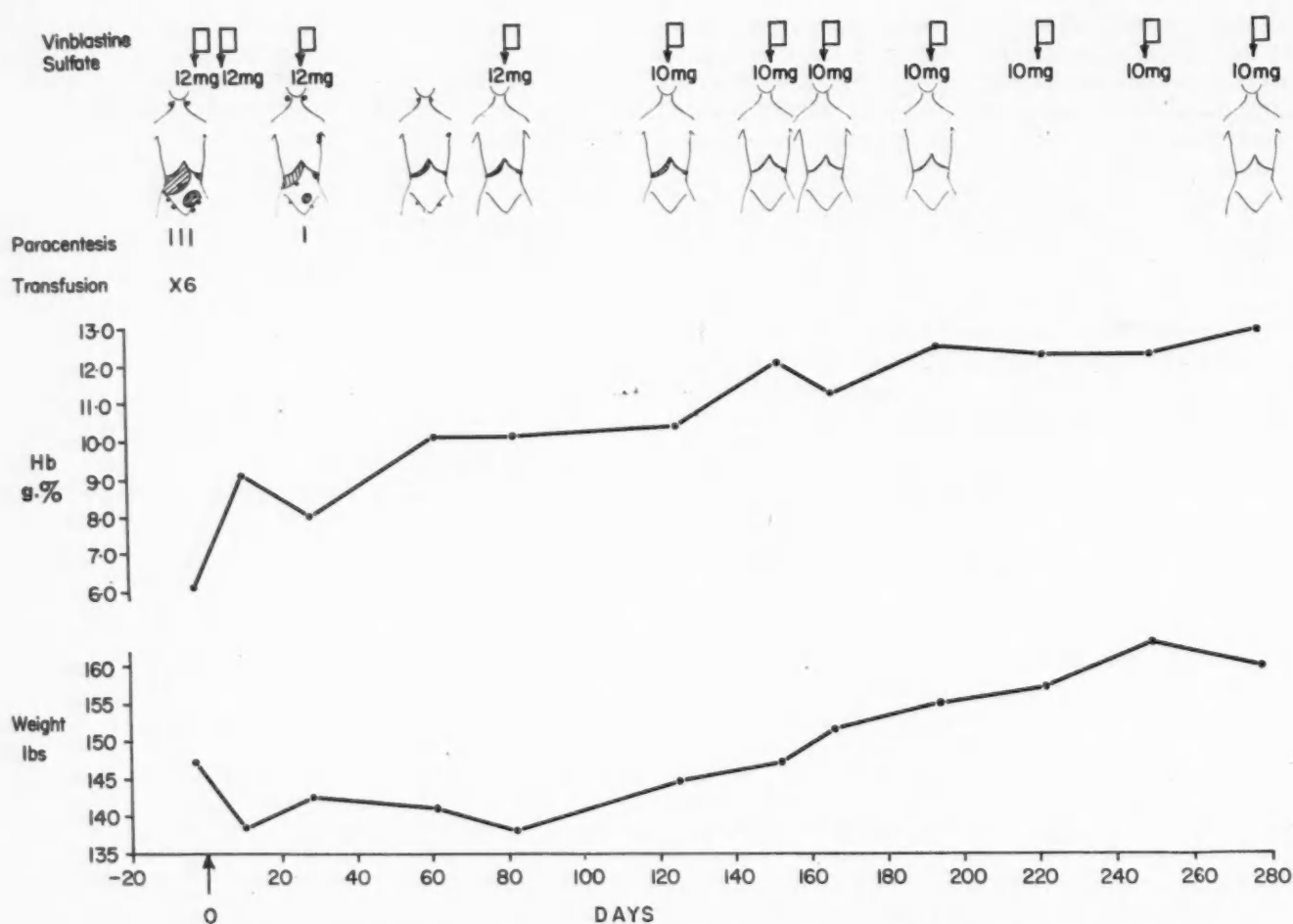


Fig. 1.—(Case 5) Hodgkin's disease illustrating response to treatment with vinblastine sulfate.

cervical and hilar nodes and splenomegaly to 10 cm. below the left costal margin. Biopsy showed Hodgkin's disease, and he received nitrogen mustard with improvement for three months. In April 1960, he noted vague upper abdominal distress with weakness, fatigue and occasional night sweats. Over the next five months he received wide-field radiation with some improvement. However, by January 1961 his hemoglobin had dropped to 8.7 g. % and in March he was again admitted with fatigue, lethargy, general malaise, decrease in appetite and productive cough. Examination showed reduced expansion of the right chest with dullness at the right lung base and a few enlarged nodes and splenomegaly to 1 cm. below the left costal margin. Radiographs of the chest showed bilateral multiple round densities up to 9 mm. in diameter. At the end of March, following the administration of 20 mg. of vinblastine sulfate intravenously, he noticed steady increase in well-being, loss of shortness of breath and improvement in appetite. When last examined at the end of May 1961, he had no lymphadenopathy, hepatomegaly and splenomegaly. His hemoglobin was 11.3 g. % and the chest radiograph showed marked reduction in the number and size of the lung lesions. He was working full time.

DISCUSSION

Vinblastine sulfate has now been used in 120 patients with malignant disease over a two-year period. The dosage of 0.2 mg. per kg. body weight intravenously, repeated in one week and in some cases given at a two- to four-week intervals for as

long as eight months, has produced relatively few serious toxic effects. Leukopenia, which was temporary, occurred in nearly all patients, but thrombocytopenia was not observed. There was no definite evidence of a correlation between the degree of leukopenia and the beneficial effect. Remissions in Hodgkin's disease have been observed in the absence of leukopenia following therapy.

Five of the 51 patients with solid tumours have shown temporary improvement. In this series the agent was not continued when the patient failed to respond to the initial course of treatment.

Results in leukemia and malignant lymphomas other than Hodgkin's disease have been disappointing, with only temporary control of the disease resulting in 10 of 35 patients. Four of the nine patients with acute stem cell leukemia responded; two had partial remission lasting four and six weeks and two had complete remissions for seven and eight weeks. One patient with leukosarcoma had a partial remission of six weeks' duration. Five of the 15 patients with other malignant lymphomas responded for periods of two and one-half to three months.

In our opinion the agent seems to have been most effective in the treatment of patients with Hodgkin's disease. Twelve of 27 patients in the advanced stages of this disease, previously treated with radiation and chemotherapy, have had marked subjective and objective improvement lasting for

two to 11 months. It is our impression that patients receiving intermittent therapy at two- to four-week intervals had longer remissions than those to whom maintenance therapy was not given. Four additional patients with disseminated Hodgkin's disease received vinblastine sulfate in combination with radiation, either as the initial therapy or early in the course of their disease. Three of these have shown recurrent lymphadenopathy and systemic symptoms shortly after completion of treatment.

Fourteen of the patients received nitrogen mustard and vinblastine sulfate in the management of Hodgkin's disease. Of the 12 who received nitrogen mustard first, 11 had remissions lasting for one week to 32 weeks with a mean duration of eleven weeks. Six of these patients responded to subsequent vinblastine sulfate administration for periods lasting from eight weeks to 47 weeks with a mean duration of 20 weeks. The two patients who first received vinblastine sulfate had remissions for 35 to 37 weeks with no improvement following nitrogen mustard. This limited experience suggests that vinblastine sulfate may be as useful as nitrogen mustard in the treatment of Hodgkin's disease. Indeed, it would seem that when a remission is obtained following vinblastine sulfate it will be of longer duration on the average than remission obtained with nitrogen mustard.

There has been a long and continuing experience in the management of Hodgkin's disease in this centre,¹³ and it is our firm conviction that alkylating agents and vinblastine sulfate should be withheld until events show that radiation therapy is no longer effective. The use of chemotherapeutic agents for localized Hodgkin's disease in our opinion constitutes improper treatment.

SUMMARY

One hundred and twenty patients with malignant disease have been treated with vinblastine sulfate.

A total dose of 0.2 mg. per kg. given intravenously in 10 divided doses over a five- to ten-hour period repeated in one week, and at two- to four-week intervals for as long as eight months, has produced few serious toxic effects.

Useful temporary remissions have occurred in a few patients with solid tumours, acute stem cell leukemia, lymphosarcoma and reticulum cell sarcoma.

Twelve of 27 patients with advanced Hodgkin's disease have shown useful remissions lasting from two to 11 months.

Vinblastine sulfate seems to be as useful as nitrogen mustard in Hodgkin's disease and may be effective when the patient is resistant to alkylating agents.

It is our opinion that localized Hodgkin's disease should be treated with radiation therapy. Alkylating agents and vinblastine sulfate should be reserved for advanced cases.

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PAGES OUT OF THE PAST: FROM THE JOURNAL OF FIFTY YEARS AGO

THE ONTARIO MEDICAL COUNCIL

The expected has happened and the Ontario Medical Council has yielded to the persistent demands for radical changes in its methods and examinations.

Possibly it has not shown enough enthusiasm in the matter of reorganization, but as this is under the consideration of a committee it is too soon to criticize.

What is really important, though, is the tacit admission that the universities are not only competent to carry on the work of medical education, but are to be trusted.

Possibly the council was wise in retaining the power to examine candidates for a licence at the end of the fifth year in medicine, surgery, and midwifery, and its action in appointing three university men as well as three from the profession at large as examiners was most commendable. In this way there will be a strong check on any university showing a tendency to fall from grace, and the standard of medical education is likely to advance rather than retrograde.

We are still of the opinion that the Medical Council is far too great in numbers, and if the five universities were given one representative each, the general profession five,

and the homeopaths one, it would be ample to do the work satisfactorily and well.

Another modification must be made, too, in the interest of the student. Now that the costly examinations are done away with, the excessive fee should be greatly modified.

It is to be hoped that during the recess the re-organization committee will not, like the House of Lords, balk at the idea of reforming itself, but will rise to the occasion with the same promptness which characterized it when it cut off the representative of two non-active universities. Perhaps the incentive will not be quite as strong, but the necessity is certainly as great.

The council is to be congratulated on having as energetic and progressive a man as Dr. Edward Ryan as its president; he is not only a council enthusiast, but an ardent university man as well.

To summarize the sweeping changes in a few words: the university and council examinations have become identical; council examinations are abolished with the exception of a test in medicine, surgery, and midwifery at the end of five years of a successful university course.—Editorial, *Canad. M. A. J.*, 1: 883, 1911.

VINCALEUKOBLASTINE IN THE TREATMENT OF MALIGNANT DISEASE*

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THE MADAGASCAR periwinkle, *Vinca rosea* Linn, has long enjoyed a reputation among the natives of Jamaica as an effective oral remedy in diabetes mellitus. In the course of investigating the possible hypoglycemic activity of this plant, it was discovered by Noble, Beer and Cutts,¹ at the University of Western Ontario, that although in animals it had no such action it had, nevertheless, a potent effect on the bone marrow, producing profound changes particularly in the white cell elements. This led to trial in experimental mouse leukemia and other tumours, where it has a marked oncolytic effect.² The active principle is an alkaloid containing indole and hydroindole configurations and has been crystallized and made available for clinical study as vincaleukoblastine or VLB.[†] Preliminary reports of its use in patients with malignant disease have been made by Warwick *et al.*,³ by Hodes, Rohn and Bond⁴ and by Hertz, Lipsett and Moy.⁵

The present communication reports the experience with the use of this agent in 55 patients with malignant disease, mostly leukemias and lymphomas, treated in the Vancouver area between June 1960 and April 1961.

MATERIAL

The patients treated fell into various diagnostic categories as shown in Table I. The diagnosis was made by biopsy in all cases of lymphomas and other solid tumours and by examination of the blood and bone marrow in the case of leukemias. Autopsies were carried out to complete the diagnosis in 29 of the 36 patients who have died.

There were 42 males and 13 females. The ages of the patients ranged from 1½ years to 78 years and were distributed fairly evenly over the decades. Thirty-seven of the 55 patients had been treated previously by various means, including surgical excision, radiation and chemotherapy, and had become resistant to therapy or the disease had become too widespread to lend itself to attack by field radiation. The remaining 18 cases received VLB as the initial therapeutic agent. Twenty-four of the total group were classified as being in poor condition or in a terminal state at the time VLB was started, 16 were in fair condition and 15 were in good condition.

METHOD OF TREATMENT

The first six patients were given the drug in a dosage of 0.15 mg. per kg. intravenously daily on three or four successive days. It was found, however, that although this produced rapid remission of symptoms in two patients, it produced profound effects on the bone marrow of the others, as well as severe generalized toxicity. This method was therefore abandoned and the succeeding patients were treated with 10-mg. doses, intravenously, at intervals of three or four days or longer, the number of treatments depending on the response of the disease and the reaction of the bone marrow. Children were treated, with intermittent injections at the same intervals, in dosage of about 0.15 mg. per kg. It was found that a single injection of this size would be sufficient to drop the white count to low levels occasionally but that the majority of patients would tolerate one or two doses a week, sometimes for long periods, without dangerous leukopenia. Ten persons received over 100 mg. of VLB and four received more than 200 mg.

RESULTS OF TREATMENT

Hodgkin's Disease

Only two of the 15 cases of Hodgkin's disease had not been treated previously. A 71-year-old man had disease confined to the left side of his neck, with no systemic symptoms. He was treated with 50 mg. of VLB; the lymph node enlargement disappeared and he has remained well for seven months without further treatment or evidence of recurrence. A 38-year-old woman, with disease in her neck and mediastinum and slight systemic symptoms, has received 40 mg. of VLB which has reduced her lymph nodes to normal size; she has had no recurrence of nodes or systemic symptoms two months later.

Thirteen patients treated previously were now resistant to therapy and showed evidence of diffuse generalized disease. Of these, two had no response whatever to treatment with VLB and died shortly afterward. Ten had partial remissions of varying degree. This improvement ranged from temporary relief of pain or partial reduction in the size of lymph nodes to almost complete clinical regression of the disease except for persistence of anemia or splenomegaly or low-grade fever. Several of these patients who had been regarded as moribund were able to return home and resume partial activity. One patient with widespread skin lesions is now entirely free of any sign of the disease. The duration of remission in these cases has ranged from one month to five months. In the main, those with widespread lesions, even though they respond temporarily, tend to relapse within three months.

CASE 6.—A 31-year-old man discovered enlarged lymph nodes in his axilla in 1957; these were biopsied in 1958 and a diagnosis of Hodgkin's disease was estab-

*From the University of British Columbia, the Vancouver General Hospital, the Health Centre for Children and the British Columbia Cancer Institute.

†The generic name vinblastine has been assigned to the drug and it is marketed as Velbe by Eli Lilly & Company. We are indebted to the Lilly Company for its very generous supply of this material with which the present investigation was conducted.

TABLE I.

Case	Age	Sex	Diagnosis	Previous treatment	Total dose of VLB	Condition at start	Result	Survival from beginning VLB
1	12	F	Hodgkin's disease	Yes	20 mg.	Poor	Return to full activity. Some degree of anemia remaining	Alive 2½ months
2	16	M	Hodgkin's disease	Yes	40 mg.	Fair	Return to full activity. Infiltrates in lungs remain. Relapsed in several weeks	Alive 6 months
3	23	M	Hodgkin's disease	Yes	30 mg.	Fair	Lymph nodes, fever, splenomegaly subsided	Alive 1 month
4	25	M	Hodgkin's disease	Yes	10 mg.	Poor	Died 3 days after first treatment	3 days
5	28	M	Hodgkin's disease	Yes	70 mg.	Poor	One partial remission with return to limited activity. After relapse had no further response	3½ months
6	31	M	Hodgkin's disease	Yes	50 mg.	Fair	Lymph nodes, fever, splenomegaly subsided. See text	Alive 2 months
7	34	M	Hodgkin's disease	Yes	40 mg.	Poor	Return to activity for 2 months. No response	3½ months
8	35	M	Hodgkin's disease	Yes	108 mg.	Poor	Some relief of abdominal pain	4 months
9	35	M	Hodgkin's disease	Yes	30 mg.	Poor	No response	10 days
10	38	F	Hodgkin's disease	No	40 mg.	Good	Disappearance of enlarged nodes and fever	Alive 2 months
11	39	F	Hodgkin's disease	Yes	30 mg.	Poor	Return to partial activity. Continuing anemia	Alive 6 months
					30 mg.	Poor	Return to partial activity. Continuing anemia	
12	43	M	Hodgkin's disease	Yes	55 mg.	Poor	Complete atelectasis one lung relieved. Splenomegaly and fever disappeared. Returned to activity	Alive 1½ months
13	47	F	Hodgkin's disease	Yes	100 mg.	Good	Complete disappearance of lymph nodes and skin lesions	Alive 4 months
14	55	F	Hodgkin's disease	Yes	90 mg.	Poor	Some relief of ascites and abdominal pain	3½ months
15	71	M	Hodgkin's disease	No	50 mg.	Good	Complete disappearance of lymph nodes	Alive 7 months
16	5	M	Acute leukemia	Yes	12 mg.	Good	No clinical response	2 months
17	5	M	Acute leukemia	Yes	15 mg.	Poor	No clinical response	2 weeks
18	6	M	Acute leukemia	Yes	6 mg.	Good	No clinical response	2 months
19	9	M	Acute leukemia	Yes	52 mg.	Fair	Improved but had 6-M.P. concurrently	Alive 1½ months
20	11	M	Acute leukemia	Yes	30 mg.	Poor	No clinical response	5 weeks
21	11	M	Acute leukemia	Yes	205 mg.	Fair	Slight temporary improvement	3½ months
22	14	F	Acute leukemia	Yes	100 mg.	Fair	Partial remission—see text	10 months
23	16	M	Acute leukemia	Yes	90 mg.	Poor	Decrease in lymph nodes. Subjective improvement for 2 weeks	1¼ months
24	18	M	Acute leukemia	No	30 mg.	Fair	No clinical response	2 weeks
25	26	M	Acute leukemia	No	60 mg.	Poor	No clinical response	3 weeks
26	26	F	Acute leukemia	Yes	34 mg.	Poor	Rapid decline to death	1 week
27	36	M	Acute leukemia	No	235 mg.	Good	Partial remission—see text	7 months
28	39	M	Acute leukemia	No	10 mg.	Poor	Died day of first treatment	0
29	42	M	diGuglielmo's disease—acute	No	380 mg.	Good	Partial remission—see text	Alive 7 months
30	42	F	Acute leukemia	No	10 mg.	Good	Died of cerebellar hemorrhage on day treatment started	0
31	43	M	Acute leukemia	No	60 mg.	Good	Partial remission—see text	Alive 1½ months
32	61	M	Acute leukemia	Yes	110 mg.	Fair	No clinical response	3 months
33	62	M	Acute leukemia	No	36 mg.	Poor	Rapid decline to death	1 week
34	37	M	Chronic granulocytic leukemia; became myeloblastic	Yes	22 mg.	Poor	No clinical response	10 days
35	35	F	Chronic granulocytic leukemia; became myeloblastic	Yes	30 mg.	Poor	No clinical response	2 months
36	44	M	Chronic granulocytic leukemia; became myeloblastic	Yes	10 mg.	Poor	Died on day of first dose of VLB	0
37	60	M	Polycythemia vera; became myeloblastic	Yes	35 mg.	Poor	Rapid decline to death	11 days
38	1½	F	Chronic granulocytic leukemia	Yes	3.5 mg.	Poor	No clinical response	2 weeks
39	37	F	Chronic granulocytic leukemia	No	70 mg.	Good	No clinical response to VLB. Responded well to busulfan	Alive
40	73	M	Lymphosarcoma and chronic lymphocytic leukemia	No	40 mg.	Good	No change in size of lymph nodes	Not followed
41	57	M	Lymphosarcoma and chronic lymphocytic leukemia	Yes	90 mg.	Fair	Moderate reduction in lymph nodes and control of circulating lymphocyte count	4½ months. Died of myocardial infarction
42	71	M	Lymphosarcoma	Yes	20 mg.	Poor	Tumour markedly reduced in size and neurologic symptoms relieved	1 week. Died of cerebral ischemia

TABLE I.

Case	Age	Sex	Diagnosis	Previous treatment	Total dose of VLB	Condition at start	Result	Survival from beginning VLB
43	78	M	Lymphosarcoma	No	80 mg.	Fair	Tumour disappeared. Edema lower half of body disappeared—see text	Alive 2½ months
44	75	M	Lymphosarcoma	Yes	130 mg.	Poor	Almost complete resolution of skin lesions—see text	5 months
45	15	M	Reticulum-cell sarcoma	Yes	100 mg.	Poor	No clinical response. Subsequently improved with radiation	Alive
46	60	M	Reticulum-cell sarcoma	No	20 mg.	Fair	No clinical response	5 months
47	69	M	Reticulum-cell sarcoma	No	70 mg.	Poor	Almost complete remission	3½ months
48	64	M	Reticulum-cell sarcoma	No	95 mg.	Fair	Maintained with slight improvement	3½ months
49	60	M	Multiple myeloma	Yes	90 mg.	Poor	Moderate relief of pain	2 months
50	65	M	Multiple myeloma	No	36 mg.	Good	Rapid downhill course to death	1 week
51	2	M	Hepatoblastoma	Yes	3 mg.	Poor	No clinical response	2 weeks
52	5	M	Neuroblastoma	Yes	10 mg.	Poor	No clinical response	3 weeks
53	22	F	Renal embryoma	Yes	40 mg.	Poor	No clinical response	2½ months
54	61	M	Osteogenic sarcoma	Yes	155 mg.	Fair	No clinical response	4 months
55	8 mo.	M	Rhabdomyosarcoma	Yes	13 mg.	Poor	Tumour disappeared—see text	Alive 6 months

lished. He received local radiation therapy in 1958, 1959 and 1960. By March 1961 he was febrile, had lost 20 lb. in weight and had a hemoglobin level of 10.4 g. %. There was a large mass of lymph nodes, underlying the right sternomastoid muscle, 8 cm. in the long diameter. The mediastinum was widened and there was an infiltrative lesion in the left lower lobe. VLB in a total dose of 50 mg. reduced his temperature to normal levels. The mediastinal mass disappeared and the cervical nodes were reduced to 1.5 cm. in long diameter. His appetite, which had been reduced, returned to normal and he gained 5 lb. in a month. His hemoglobin has not returned to normal. He has now been in remission for two months.

Acute Leukemia

Of 18 cases of acute blast-cell leukemia, 10 had been treated previously with other agents including prednisone, 6-mercaptopurine, and amethopterin, but either had not responded or had become resistant to therapy. Of these, six had no further improvement on treatment with VLB. One has had a partial remission when VLB has been combined with 6-mercaptopurine, and the part played by either drug cannot be assessed. One patient had a brief partial remission lasting two weeks and then he relapsed and died. The other case in this group had the following course.

CASE 22.—A 14-year-old girl complained of a hot, swollen right elbow in December 1959. She was treated with prednisone for rheumatic fever. Her symptoms were relieved and she was able to attend school until April 1960. At this time she had a recurrence of joint symptoms, and examination of the blood showed acute leukemia. She was treated with 6-mercaptopurine and further prednisone but by June 1960 she was in serious relapse, having become resistant to these drugs. She was given VLB 0.15 mg. per kg. on three successive days beginning May 31. Her clinical condition improved at once. The hemoglobin rose spontaneously from 9 g. to 13 g. % in a 40-day period. The platelets rose from 95,000 to 280,000 per c.mm. The white count rose from 300 to 8000 per c.mm. and the blast cells disappeared. Her spleen, which had been enlarged, did

not decrease in size. She resumed normal activity by July 1. Her hair began to fall and it became generally very thin but no areas of complete alopecia appeared. By the end of July she began to show diffuse intradermal and subcutaneous infiltration involving her face and upper trunk. This was not controlled by further VLB but disappeared with x-irradiation. She received single 10-mg. injections of VLB in August and September and remained well until the end of September when her hemoglobin, platelet count and white count began to decline. She slowly lost ground in spite of further injections of VLB and died 9½ months after beginning VLB therapy. She received a total of 100 mg. of the drug.

Eight patients with acute leukemia had not had previous treatment. Two died of causes related to their disease on the day of their first dose of VLB. Three died within three weeks, without showing signs of improvement. The following three cases showed some favourable response.

CASE 27.—A 35-year-old man was examined and the diagnosis of acute leukemia was made on June 8, 1960. His spleen was not enlarged, there were no enlarged lymph nodes and he was afebrile. His hemoglobin was 11.9 g. % and his platelets 26,000 per c.mm. His total white count was 42,000 per c.mm. of which 15% were blasts, some of which contained Auer bodies. He was treated initially with 0.15 mg. per kg. of VLB on four successive days, receiving a total of 47 mg. over this period. His white blood count fell abruptly to 1350 per c.mm. in six days. He showed subjective improvement and was able to return to work. He remained well and almost free of symptoms until November 1960, when he developed symptoms of anemia and required transfusions. After this he went steadily downhill and died on January 14, 1961. During the last two weeks of his life he received 6-mercaptopurine and prednisone but without appreciable change in his condition. During the course of his illness he received 245 mg. of VLB.

CASE 29.—A 42-year-old man was examined in September 1960 and the diagnosis of diGuglielmo's disease was made. His symptoms were those of anemia which had appeared during the three weeks previous to admis-

sion. His circulating nucleated cell count was 40,000 per c.mm. VLB therapy was begun shortly after admission and has continued to the present time. The patient's condition has remained nearly stationary during this time. His anemia has required treatment by means of transfusions, and his nucleated cell count has ranged from 5000 to 40,000 per c.mm. At present his symptoms are relatively mild and he is active, eight months after beginning treatment.

CASE 31.—A 43-year-old man developed symptoms of anemia and was found to have acute leukemia. Shortly after diagnosis, he developed multiple skin lesions which appeared and increased in size very rapidly and were characterized by a firm induration on a hemorrhagic base. At the same time the lymph nodes in his neck and axillae increased rapidly in size. His white count was elevated to 39,000 per c.mm. with 80% blast cells. With VLB therapy the skin lesions quickly resolved and the lymph nodes decreased progressively in size. When the drug was discontinued and 6-mercaptopurine substituted, there was a prompt reappearance of the lesions and a rapid increase in size of the lymph nodes. A second course of VLB produced another regression. The white count has returned to normal levels and blast cells have disappeared. The patient is still alive but with evidence of disease 1½ months after the beginning of treatment.

Acute Myeloblastic Leukemia Following Chronic Granulocytic Leukemia and Polycythemia

Four patients were seen who were placed in this category. All had been previously treated for chronic leukemia and had shown an abrupt transition into acute leukemia. One patient died on the day that he received the first dose of VLB. The other patients received doses up to 30 mg. but had no response, either clinically or hematologically, and died within two weeks.

Chronic Granulocytic Leukemia

A 37-year-old woman, in whom the diagnosis of chronic granulocytic leukemia had been made, was treated with a total of 70 mg. of VLB without significant change in her clinical condition or in her total white count. She then had the usually satisfactory response when treated with busulfan (Myleran). Her blood findings returned to normal and her spleen decreased in size. A 1½-year-old infant with an atypical picture of chronic granulocytic leukemia had no response to VLB in the terminal phase of her illness.

Lymphocytic Leukemia

Five patients with lymphocytic proliferation were treated. One patient with lymphosarcoma and chronic lymphocytic leukemia was treated but has not been seen in follow-up. A patient with similar combined disease experienced moderate diminution in the size of his lymph nodes and a modest improvement in his well-being. When his nodes had ceased to respond to therapy with VLB, local radiation proved to be effective in bringing

about a further reduction in size. In one patient with a long-standing lymphoblastic lymphosarcoma, who had reached a terminal state with a very large tumour in the right axilla producing Pancoast's syndrome, there was a rapid decrease in the size of his tumour, with relief of some of the neurologic phenomena resulting from pressure on his brachial plexus.

CASE 43.—A 78-year-old man presented with gross swelling of the legs, penis and scrotum due to a large lymphoblastic lymphosarcoma involving the lymph nodes in his inguinal, iliac and para-aortic areas. Treatment was begun with VLB and, over the course of two months during which he received 90 mg. of the drug, he had progressive relief of the edema. At the time of writing, three months after treatment was begun, he has no evidence of tumour.

CASE 44.—A 75-year-old Japanese male reported in August 1960 with rapidly developing lymphoblastic nodules in his skin but without evidence of disease elsewhere. These nodules were sensitive to radiation but multiplied in number and increased in size so rapidly that it was impossible to irradiate them all. After treatment with 30 mg. of VLB he had resolution of his skin lesions so that they almost all disappeared over the course of one month. When they recurred about two months later, they responded poorly to VLB but individual lesions could still be improved with radiation. This patient succumbed five months after the beginning of VLB therapy (Figs. 1 and 2).

Reticulum Cell Sarcoma

Two patients with this disease had no appreciable response when treated with VLB. One of these subsequently had a satisfactory response to radiation. Two have had partial improvement, as follows.

CASE 47.—A 69-year-old man presented with an enlarged inguinal lymph node, palpable retroperitoneal lymph nodes and a large spleen and liver. Treatment was begun with VLB but proceeded slowly because of the marked leukopenia which resulted. His course was interrupted by acute perforation of his gallbladder, which was repaired surgically. Since then he has continued to improve. He is gaining weight and feeling better. His spleen remains palpable 6 cm. below the costal margin and his hemoglobin remains stationary at 11 g. %. He has resumed moderate activity, 3½ months after the beginning of therapy.

CASE 48.—A 64-year-old man with a reticulum-cell sarcoma involving the spleen, liver, retroperitoneal nodes and pleura was treated with intravenous VLB with subjective improvement but without control of his rapidly recurring pleural effusion. When 0.1 mg. of VLB was injected into the pleura, considerable left chest pain resulted which lasted for two days. It appeared, however, that there had been some diminution in the amount of pleural effusion, and the interpleural injection was repeated in doses of 0.2, 1.0 and 5.0 mg. Each injection was attended with pain lasting up to two days, but the pleural effusion became continuously less and has now been absent for some two months.



Fig. 1.—(Case 44) Facial lesions before commencement of therapy.

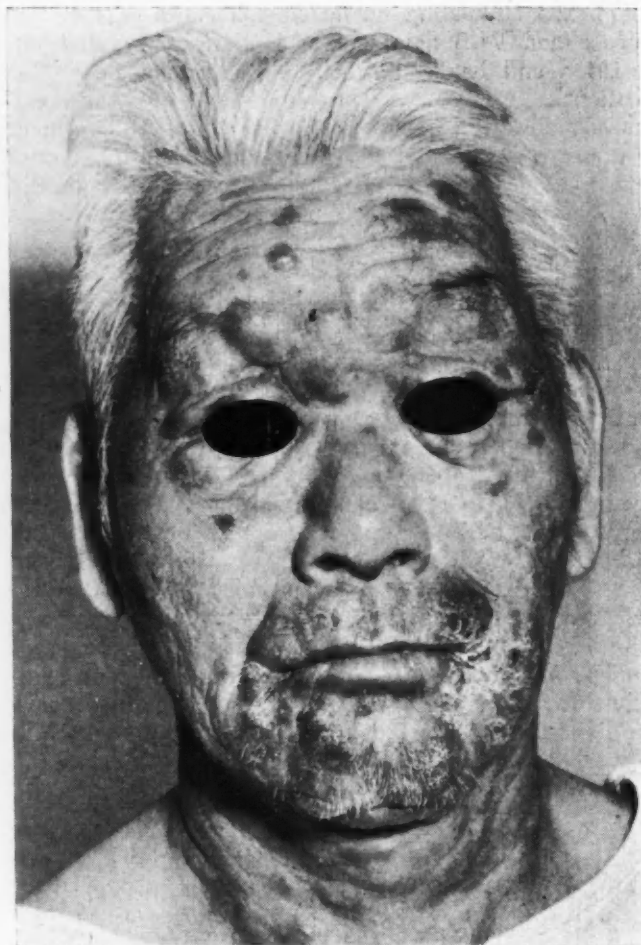


Fig. 2.—(Case 44) Resolution of facial lesions after three weeks of therapy with VLB.

Intravenous therapy in a maintenance dosage has held the intra-abdominal disease in check without reducing the size of either liver or spleen.

Miscellaneous

Two patients with multiple myeloma were treated with this agent. One patient had slight relief of pain and slight improvement in neurologic signs caused by impingement of a tumour mass on the cervical cord. One showed no improvement. One child with a hepatoblastoma and one with a neuroblastoma, a young woman with embryoma of the kidney and a 61-year-old man with osteogenic sarcoma showed no changes with VLB despite adequate dosage.

CASE 55.—A male infant was known to have a lump in his buttock at or shortly after birth. This was biopsied when the child was six months old and found to be an embryonal rhabdomyosarcoma. He received radiation therapy without significant benefit. At 8 months he showed spread to his right inguinal area and his right lower abdomen. He was given 1.5 mg. of VLB on two successive days at that time, which caused the tumour to shrink markedly. It recurred at 12 months and he received 2.5 mg. of the drug on two successive days with repetition of this program two weeks later. With this the mass entirely disappeared and at 16 months the child has no evidence of disease on examination. He received a total of 13 mg. of VLB.

TOXICITY

As the experience with the first few patients showed, the drug is capable of producing a severe generalized toxic reaction which hastens the demise of persons already ill with neoplastic disease. It is manifested by weakness, rising fever, apathy, anorexia and death. Several patients maintained on weekly or twice weekly dosages noted a feeling of malaise, without localizing symptoms, occurring 24 hours after injection and lasting for 12 hours. This usually was not severe but might be sufficient to limit the patient's activities. Four patients showed partial epilation which, once established, was permanent. It did not appear to be related to total dose, although two of those that developed it had received a large initial dose of the drug. Anorexia, nausea and vomiting were the commonest toxic symptoms but they were usually slight and always transient. One patient developed bilateral foot drop during his hospital stay. This man had cranial nerve paresis prior to the treatment of his Hodgkin's disease with VLB and it seems probable that the foot drop was related to the disease process rather than to the treatment. No generalized skin reactions were noted and no fever could be attributed to the drug. The material is irritating when injected subcutaneously. The pain which occurs immediately is followed by a rather extensive inflammatory response which persists for from several

days to a week as an indurated painful swelling about the vein. Our patients, in whom this accident occurred, did not show any actual slough.

HEMATOLOGIC EFFECTS

As originally noted in experiments by Noble, VLB has a profound effect on the circulating white cell count. All the non-leukemic cases showed a fall, with the dosages used, to levels below 4000 cells per c.mm. and two-thirds showed a fall below 2000 cells per c.mm. In five cases the count went down below 1000. If the drug was discontinued, recovery from leukopenia usually began within seven days and always within 14 days. Often the white count began to recover while the drug was still being given and returned to normal levels, where it remained during continued administration of the drug. Some patients died of effects of their disease when the white blood count was low. Five patients developed staphylococcal skin infections during treatment, an incidence hardly more than would be expected in a group of hospitalized patients with severe terminal illnesses. One patient with Hodgkin's disease contracted a staphylococcal septicemia when her white blood count was 200 and recovered with antibiotic therapy, coincident with a rise in the white blood count to near-normal levels.

Patients with leukemia showed a variable response. Those with blast-cell leukemias who survived long enough to permit observation showed a significant drop in the total white blood count to 4000 per c.mm. or less in seven of 12 instances. In the other five, the count was not lowered or it actually went up. Where the total count was reduced, the differential count was usually not changed and the percentage of blast cells remained the same.

The platelet counts were unaffected in 32 cases. They rose from normal to high or from subnormal to normal levels coincidentally with clinical improvement in four cases. In three instances, the numbers of platelets decreased during the course of the acute leukemia, probably independently of drug action. In five cases, these counts fell to low levels in relation to drug therapy and in such a way as to suggest a causal relationship. Of these, three patients received an initial dose that was later considered to be too large.

The effect of the drug on red-cell production was often obscured by the transfusions made necessary by the condition of the patient. Most of the patients had anemia when treatment was started, and the nature of the illness was calculated to increase the degree of the anemia. There were 17 patients with lymphomas who did not receive blood transfusions during treatment. In only two of these did the hemoglobin remain at the original levels. The remainder showed declines ranging from 0.03 g. % per day to as much as 0.2 g. % per day. Of

the total group of patients only four of those who lived long enough to permit observation, and who had reticulocyte counts of more than 0.7% to begin with, failed to show a marked drop in reticulocytes or even complete disappearance. The drop in reticulocytes and the fall of the hemoglobin were coincident. When the drug was discontinued, the reticulocyte count usually returned to normal and on several occasions it reached levels greater than normal. The same tendency to return to normal was also observed even when treatment was continued, and occurred not only in patients with lymphomas but in those with acute leukemia in which a high reticulocyte count is not expected. The return of the reticulocytes towards normal usually began within a week of the discontinuance of treatment. Those responses which occurred even during the continuation of the treatment usually began three or four weeks after the onset of therapy.

PATHOLOGICAL OBSERVATIONS

In the cases which came to autopsy, after proving unresponsive to the drug, the pathologic findings were those expected in the various neoplasms concerned. The specific action of VLB was discernible in several cases in whom a toxic effect was observed clinically.

CASE 26—A 26-year-old woman was admitted in a subterminal state, having been treated continuously for acute leukemia over a period of two years. She was given 0.15 mg. per kg. of VLB on four successive days. Her white count fell from 74,500 per c.mm. to 600 per c.mm. in a 10-day interval. Blast cells did not entirely disappear. She deteriorated steadily and died 10 days after admission. At autopsy, the spleen was congested. Some follicular pattern remained and some blast cells were seen. The lymph nodes contained no recognizable blast cells. The bone marrow was almost entirely necrotic. The cells had lost their normal outlines and few apparently viable cells remained (Fig. 3).

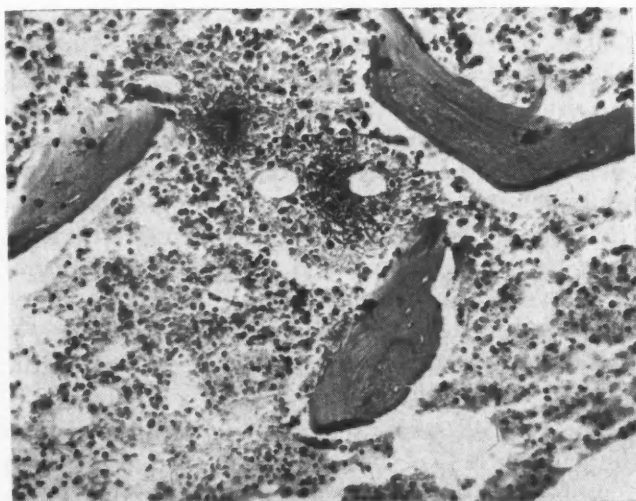


Fig. 3.—(Case 26) Photomicrograph of section from lumbar vertebra showing degeneration of megakaryocytes with deposition of fibrin and blurring of cellular outlines.

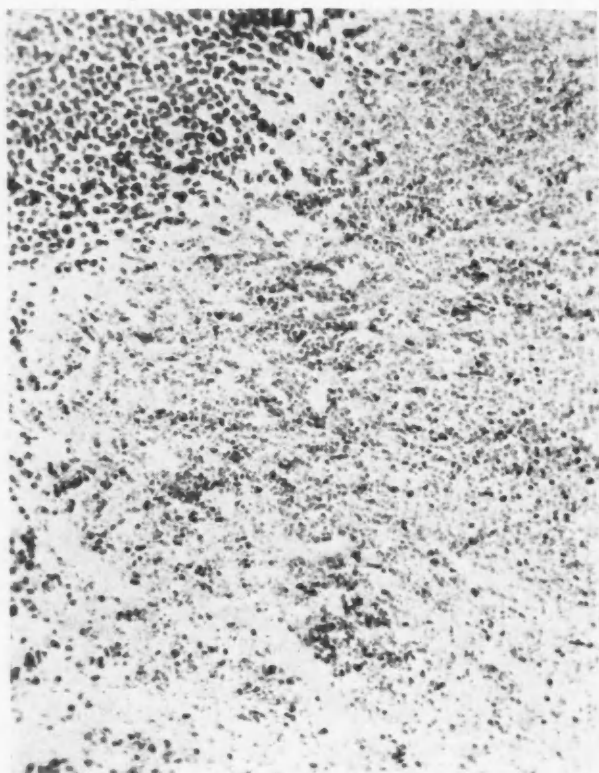


Fig. 4.—(Case 42) Section from tumour showing patchy necrosis.

The effect on solitary tumours of anaplastic type was striking. Extensive zones of necrosis were observed with some scattered islands of residual tumour tissue (Fig. 4). Since the masses from which the sections were made had shown a marked reduction in size over the preceding three days, it is probable that this change was due to the drug.

DISCUSSION

Vincalukoblastine is undoubtedly a highly active agent capable of producing profound changes in normal tissues. The white cell series is regularly affected by the drug, and this effect is related to dose and is reversible. Profound leukopenia was occasionally produced by one 10-mg. dose, but the average amount required to provoke a definite leukopenic reaction was about 30 mg. The total white count always returned to normal levels when the drug was discontinued, and nearly always did so even if it was not entirely discontinued but was carried on in maintenance dose. All elements of the white-cell series were affected, and decreased or increased at the same rate. This suggests that the drug has some direct lethal action on lymphocytes or provokes an adrenal cortical reaction which leads to lymphocytic depletion, since a failure of production should lead to a slower decline in the level of circulating lymphocytes.

The red-cell series seems no less sensitive than the leukocytes. The reticulocyte count falls early to a profoundly low level. In many cases this probably accounts for the decline of the hemoglobin, the erythropoietic activity being abruptly halted.

In a few cases the hemoglobin fell at such a rate as to suggest that this was not the only mechanism and, since there was no evident bleeding in these cases, it may be that some element of hemolysis was added to the suppression of the erythrocyte production. Ordinary laboratory tests for hemolysis, however, were negative. Studies of red cell survival with radioactive chromium are under way, but sufficient observations have not been completed to allow any conclusions to be drawn.

The platelets do not share the sensitivity of the red- and white-cell series. Only when large, and generally toxic, doses were given did the platelet count fall. The levels found were those usual for the stage of the disease, and there is no evidence in this study which would relate the platelet level to the administration of the drug.

The recovery of the reticulocyte count paralleled that of the white cell count and could occur while the drug was being administered in maintenance dosages.

In therapeutic dosages, the effect on normal tissues, other than the bone marrow, is unpredictable and usually slight. Occasional patients developed some degree of epilation, and the patient should be told of the possibility of this complication before treatment is begun. The gastrointestinal complications are almost always of a very minor sort and are transient, lasting no longer than 24 hours and usually only a few hours. In this respect, vincalukoblastine compares favourably with 6-mercaptopurine and is superior to amethopterin. Like many chemotherapeutic agents, it is injurious to the tissues if injected subcutaneously. Great care must be exercised to insure that the dose is delivered into the vein. In patients with poor veins, it is best to establish a freely flowing intravenous infusion and to inject the drug into the tubing of this apparatus.

Undoubtedly vincalukoblastine has an oncolytic effect, which in some cases is dramatic. This was most evident in those patients with anaplastic, lymphocytic or reticulum-cell tumours in which the tumour tissue seemed to melt away. The rate of dissolution of the tumour in a few cases was equal to that produced, in favourable circumstances, by x-radiation. The ability of the drug to maintain remission of these tumours, however, was limited and there was recurrence in a matter of a few weeks or a month.

The reaction of the tumours resembled that of the bone marrow, in that there was an initial rapidly developing dissolution of cells followed by the rapid development of resistance to the drug, so that in the presence of continued therapy, the white-cell count and the reticulocytes returned towards normal and the tumour cells multiplied as before. The rapidity with which this occurs, and the fact that it occurs in unrelated tissues, suggest that the drug is inactivated by some general body mechanism rather than that resistance is due to the development of a mutation of the tumour.

The experience with acute leukemia is disappointing. Whereas about one-quarter of adult cases of acute leukemia respond favourably to 6-mercaptopurine,⁶ the rate of improvement with VLB in this small series is not more than half of that. Although two cases showed very good remissions which continued for six months, neither of these was complete. The most encouraging response was in Case 6, who had a good partial-remission, lasting six months after she had become refractory to both 6-mercaptopurine and prednisone. The one patient with diGuglielmo's syndrome has had a sustained partial remission, and this response may be related to the marked effect that this drug has on red-cell production.

The experience with Hodgkin's disease, on the other hand, is more promising. As yet, too few new cases have been treated to compare the relative effectiveness of VLB and other established treatment modalities. There is some evidence that it may approach the effectiveness of nitrogen mustard. VLB appears to be an addition to the present therapy of patients who have become totally resistant to other types of treatment. So far, however, the prolongation of well-being and relief of symptoms have been short and, almost always, the effect on the tumour tissues has been less than complete.

THE METABOLISM OF THE VOLATILE AMINES

II. OBSERVATIONS ON THE USE OF L-ARGININE-L-GLUTAMATE IN THE THERAPY OF ACUTE HEPATIC ENCEPHALOPATHY*

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THE COMPLICATION characterized by the appearance of progressive neurological abnormalities in a patient with severe liver disease presents a difficult problem in therapy and carries a serious prognosis. The factors associated with the genesis of this condition appear to be related to abnormalities in the elimination of certain end-products of protein catabolism, particularly ammonia.¹⁻³ Many names have been advocated to designate this condition, including episodic hepatic encephalopathy,⁴ portal-systemic encephalopathy,⁵ hepatocerebral intoxication,⁶ ammonia intoxication⁷ and hepatic coma.^{8, 9} Acute hepatic encephalopathy is used throughout this discussion, because it seems to be the most appropriate.

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SUMMARY AND CONCLUSIONS

Vincalcaleukoblastine, an alkaloid derived from the Madagascar periwinkle, has been used in 55 cases of malignant disease, principally the leukemias and lymphomas. It has profound effects on normal tissues and, in high dosage, it is capable of producing severe generalized toxicity. In therapeutic dosage, it causes marked leukopenia and temporary cessation of erythropoiesis but it has little effect on the platelet count. Toxic effects on the gastrointestinal tract and skin are slight and are not closely related to dose.

Remissions produced in acute leukemia have been few in number and incomplete. In one patient the drug effected a partial, but fairly well sustained, remission after the disease had become resistant to other agents.

Of the diseases studied in this series, Hodgkin's disease is the most sensitive to the drug; new cases may respond with complete temporary remissions. Patients with terminal illness may experience partial improvement with return to physical activity.

Anaplastic tumours may show marked temporary oncolytic changes after treatment with the drug, even though they are resistant to other agents.

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The recognition of the relationship between an elevation in the ammonia content of blood and the development of neurological disorders, both in experimental animals and humans, has led to the use of therapeutic measures which either inhibit the production of ammonia or increase the rate of removal of ammonia from the blood stream. The agents which have been used to hasten the removal of ammonia from the blood are physiologically active, naturally occurring, simple chemical compounds. They include the three principal constituents of the Krebs-Henseleit urea cycle: ornithine,¹⁶ citrulline²² and arginine,^{4, 6, 7, 16} as well as other amino acids such as aspartic acid and glutamic acid.^{9, 13-15} Arginine-glutamate, a compound which combines the ammonia-reducing properties of arginine and glutamic acid while, at the same time, having less tendency to upset the precarious acid-base balance of patients suffering from acute hepatic encephalopathy, has recently become available for the therapy of this condition.

While this investigation was designed primarily to study the effect of l-arginine-l-glutamate therapy on the clinical condition of the patient, several other important features, particularly the etiological factors and the significance of the blood ammonia levels, were noted. The prognosis is discussed in order to make the study complete, although it must

TABLE I.—THE ETIOLOGY, BLOOD AMMONIA LEVELS AND EFFECT OF THERAPY IN 40 PATIENTS WITH ACUTE HEPATIC ENCEPHALOPATHY TREATED WITH L-ARGININE-L-GLUTAMATE

Patient and No.	Age and Sex	Underlying Conditions	Precipitating and Aggravating Factors	Amount (grams)	Blood NH ₃ Level Before	Blood NH ₃ Level After	Neurological Condition	Other Therapy	Comments
R.M. 1	49 M	Acute hepatic insufficiency	Hematemesis	100	1.46	1.08	Slight improvement	Transfusions, neomycin	Died 24 hours later
M.M. 2	47 F	Alcoholic cirrhosis	(a) Hematemesis	50	0.70	0.32	Improved	Transfusions, neomycin, kanamycin	Became unconscious twice within 24 hours, recovered, was discharged
		Pneumonia	(b) Hematemesis	100	0.62	0.33	Improved		
H.C. 3	44 F	Biliary cirrhosis	Hematemesis	50	Not measured		Marked improvement	Transfusions, neomycin, penicillin, tracheotomy	Had a cholecystectomy 16 years previously. Died 5 months after this episode of bleeding
R.G. 4	12 M	Juvenile cirrhosis	(a) Trauma, hematemesis, pentobarbital	50	0.70	0.22	Unchanged	Transfusions, neomycin, steroids	Developed ascites and died of a recurrent bleeding one month later
			(b) hematemesis	50	0.41	0.33	Improved		
G.O. 5	43 M	Acute hepatic insufficiency	Hematemesis, promazine, prochlorperazine, chlorothiazide	100	0.95	1.46	Deteriorated	Transfusions, neomycin, penicillin, chloramphenicol	Admitted with severe ascites which cleared on therapy. Died 24 hours after his first episode of bleeding
L.D. 6	60 M	Alcoholic cirrhosis	Hematemesis, chlorothiazide	100	1.24	1.33	Slight improvement	Transfusions, neomycin	Died 4 days later
C.M. 7	23 F	Postnecrotic cirrhosis	Hematemesis, mercaptomerin sodium	200	1.55	0.60	Slight improvement	Transfusions, neomycin, tetracycline, steroids	Infusion started 48 hours after the condition was diagnosed. Died two days later
R.F. 8	33 F	Alcoholic cirrhosis	Hematemesis, chlorpromazine	100	2.00	1.04	Improved	Tetracycline	Underwent portacaval shunt and discharged
C.J. 9	50 M	Alcoholic cirrhosis	Hematemesis, phenobarbital	100	1.36	0.47	Slight improvement	Transfusions, neomycin	Died after further extensive bleeding
		Portal vein thrombosis							
N.B. 10	55 M	Alcoholic cirrhosis	Hematemesis, paraldehyde	(a) 50	0.77	0.59	Improved	Transfusions, neomycin	Died after further bleeding
				(b) 50	0.59	0.66	Improved		
C.I. 11	73 M	Alcoholic cirrhosis	Hematemesis, phenobarbital, chlorothiazide	100	0.83	0.51	Improved	Transfusions, neomycin	Died 3 weeks later after further bleeding
M.B. 12	73 F	Cirrhosis, type undetermined	Rectal bleeding (biopsy), chlorothiazide	(a) 50	1.22	1.24	Unchanged	Transfusions, neomycin, chloramphenicol	Has had hepatomegaly since 1925; discharged 3 weeks after this episode
		Rectal carcinoma		(b) 50	1.24	1.02	Improved		
A.F. 13	43 F	Alcoholic cirrhosis	(a) Hematemesis, chlorothiazide	100	1.32	0.70	Improved	Transfusions, neomycin	Signed herself out two days later but was readmitted within one week. Discharged three weeks later but returned and died in coma
			(b) seconal and amytal, perphenazine, chlorothiazide	100	0.90	0.82	Slight improvement	Neomycin, chloramphenicol	
W.B. 14	57 M	Alcoholic cirrhosis	Hematemesis, mercaptomerin sodium, acetazolamide	100	1.32	0.70	Improved	Neomycin, steroids	Admitted with ascites which improved on therapy. Died next day after further bleeding
R.R. 15	59 F	Alcoholic cirrhosis	Hematemesis, promazine, meperidine, chlorothiazide	100	0.90	0.52	Improved	Transfusions, neomycin, penicillin	Died two days later from uncontrollable bleeding
M.P. 16	70 F	Cirrhosis, type undetermined	Hematemesis, perphenazine, chlorothiazide	100	0.95	0.23	Markedly improved	Neomycin, steroids	Died one month later of further bleeding
L.H. 17	72 M	Hemochromatosis	Hematemesis, amobarbital sodium	100	3.38		Expired	Transfusions, neomycin	Died after further bleeding
H.R. 18	45 M	Alcoholic cirrhosis	Chlorothiazide, spironolactone	100	0.92	0.25	Improved	Neomycin	Requires institutional care
O.C. 19	53 M	Alcoholic cirrhosis* Sub-total gastrectomy	Secobarbital and amobarbital promazine	100	0.80	0.34	Improved	Neomycin	Admitted because of pyloric stenosis. Became unconscious five days after operation. Died two days later
R.C. 20	53 M	Alcoholic cirrhosis	Hypokalemia, promazine, chlorothiazide	50	1.01	0.72	Improved	Potassium, vitamins	Discharged home four weeks later
E.S. 21	72 M	Hemochromatosis	Prochlorperazine	100	0.79	0.37	Improved	Penicillin	Died four days later
S.J. 22	54 M	Alcoholic cirrhosis	Hypokalemia, mercaptomerin sodium	100	1.17	0.78	Improved	Neomycin, potassium	Discharged four weeks later
K.C. 23	60 M	Cirrhosis, type undetermined	Chlorothiazide	(a) 50	1.67	0.84	Improved	Neomycin, steroids	Recovered full consciousness, expired suddenly four days later
				(b) 50	0.84	0.62	Improved		
R.M. 24	60 M	Acute hepatic insufficiency	Chlorothiazide	50	1.43	1.24	Improved	Neomycin	Died three weeks later after hematemesis
N.C. 25	53 M	Alcoholic cirrhosis	Secobarbital, chlorothiazide	50	1.65	1.38	Improved	Neomycin	Discharged one month later but readmitted subsequently
E.O. 26	34 F	Lupoid hepatitis	Chlorothiazide	100	1.15	0.77	Improved	Neomycin, steroids	Signed herself out but returned and expired in coma
T.S. 27	73 M	Cirrhosis, type undetermined	Mercaptomerin sodium	100	1.10	1.54	Unchanged	Neomycin, penicillin	Improved gradually and was discharged
C.M. 28	48 M	Agammaglobulinemia	(a) Exercise	50	1.37	0.41	Improved	Neomycin	A professional man who is able to maintain a successful practice despite recurrent bouts of encephalopathy
		Post-necrotic cirrhosis	(b) Possible withdrawal of chloramphenicol	100	0.79	0.31	Improved		Discharged home four weeks later
W.L. 29	37 M	Portacaval shunt	Alcohol	50	1.01	0.62	Improved	Chloramphenicol	
F.B. 30	66 F	Acute hepatic insufficiency							
		Alcoholic cirrhosis	(a) Diet?	100	3.16	1.17	Marked improvement	Neomycin	No cause found for sudden onset of coma. Requires institutional care. Had blisters around infusion site after first administration
		Alcoholic cirrhosis	(b) Withdrawal of neomycin	50	1.38	1.54	Improved		Died soon afterwards
B.H. 31	22 F	Lupoid hepatitis, morphine addiction, chronic alcoholism, portacaval shunt	Acute morphine withdrawal, chlorpromazine, chlorothiazide	100	1.80	2.66	Deteriorated	Neomycin, chloramphenicol, steroids	
E.N. 32	62 F	Uremia, glomerulonephritis, alcoholic cirrhosis	Trauma?	100	0.58	1.18	Deteriorated		Expired 24 hours later. She was probably not in acute hepatic encephalopathy
G.S. 33	67 F	Cholangitis, staphylococcal abscesses	Cholecystectomy 9 days previously	100	1.74	0.60	Unchanged	Neomycin	May have had a cerebrovascular accident. Died next day
M.R. 34	14 F	Infectious hepatitis	Paraldehyde	50	1.11	1.87	Deteriorated	Chloramphenicol, steroids	Died soon afterwards. Autopsy showed marked hepatic necrosis

TABLE I.—THE ETIOLOGY, BLOOD AMMONIA LEVELS AND EFFECT OF THERAPY IN 40 PATIENTS WITH ACUTE HEPATIC ENCEPHALOPATHY TREATED WITH L-ARGININE-L-GLUTAMATE

Patient and No.	Age and Sex	Underlying Conditions	Precipitating and Aggravating Factors	Amount (grams)	Blood NH ₃ Level Before	Blood NH ₃ Level After	Neurological Condition	Other Therapy	Comments
V.B. 35	49 F	Exenteration for Ca. of cervix, uretero-colic anastomosis	Peritonitis, promazine	50	2.86		Expired	Transfusions, chloramphenicol	Died one week after operation
T.B. 36	24 F	Anoxic necrosis of liver Acute heart failure	Chlorothiazide, (?) hypoglycemia	100	0.32	0.35	Unchanged	Penicillin	Had cardiac surgery two months earlier and then developed aortic regurgitation. Died next day
P.W. 37	19 F	Acute hepatitis, multiple exostoses, metastatic sarcoma	Halothane anesthesia, prochlorperazine	100	1.31	1.70	Unchanged	Neomycin, steroids	Underwent surgery three days earlier. Died 12 hours later. Cause of hepatitis unexplained
R.R. 38	59 F	Carcinoma of ampulla, cholangitis, hepatic abscesses	Whipple operation	50	0.38	.090	Deteriorated	Transfusions, neomycin	Became ill two weeks after operation and died 24 hours later
R.D. 39	44 F	Infectious hepatitis	None	(a) 100 (b) 100	0.80 0.69	1.00 0.74	Unchanged Unchanged	Neomycin, steroids	Improved markedly on steroid therapy and was discharged three weeks later
V.L. 40	10 F	Infectious hepatitis	Barbiturates, paraldehyde	(a) 50 (b) 50 (c) 50	1.20 1.18 0.91	0.88 0.87 0.55	Unchanged Slight improvement Improved	Neomycin, tetracycline, steroids	Died about three weeks after the onset of her illness

be emphasized that the outcome of this condition depends on too many factors to allow strong conclusions to be drawn regarding any one specific form or plan of therapy.

No attempt was made to carry out a study of a control series of patients not treated with arginine-glutamate, since most subjects acted as their own internal controls because the drug was usually administered after a period of observation, and frequently the clinical condition deteriorated again after a transient improvement. Also it is unreasonable to refrain from administering a potentially beneficial non-toxic agent to a seriously ill unconscious patient.

MATERIAL AND METHODS

Forty patients who experienced a total of 45 episodes of acute hepatic encephalopathy were given 51 infusions of arginine-glutamate (Table I). The majority of these patients were seen in the public wards of the Toronto General Hospital, three were in the Hospital for Sick Children, Toronto, and one was in Sunnybrook (Department of Veterans Affairs) Hospital, Toronto.

The blood-ammonia levels were determined by a personal modification of the method of Conway,¹⁰ the details of which are presented elsewhere.²⁴ Heparinized venous blood, mixed with an equal volume of saturated potassium carbonate, was allowed to stand for 20 minutes and the liberated ammonia was absorbed by dilute hydrochloric acid. The normal levels ranged from 0.30 to 0.65 µg. of ammonia nitrogen (ammonia N) per ml. blood. This is lower than most of the other reported normal levels because the factor which corrects for the incomplete diffusion of ammonia was not applied.

Most of the arginine-glutamate used in this study was donated by Abbott Laboratories (Montreal†). Usually 100 grams (4 ampoules) mixed with 600 ml. of 5% or 10% glucose in distilled water or normal saline was infused intravenously over an 8- to 12-hour period. The patients received this therapy only at the request of the house staff and

†Trade name: Modomate.

their consultants. The only side reaction noted was the development of a group of blisters around the infusion site in two patients, one of whom received a further course of therapy without a recurrence.

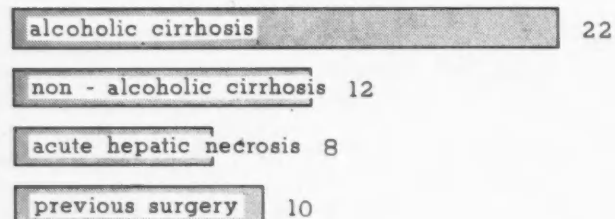
The clinical state of these patients was observed by as many responsible people as possible and a consensus was obtained after each course of therapy. The criterion of benefit was definite improvement in the level of consciousness within 24 hours of starting the infusion. Since this improvement was based on subjective impressions rather than on specific cerebral function tests, it was difficult to standardize. Some patients had a remarkable and lasting improvement within a short time of starting the infusion, while others had a brief but transient return to consciousness which was an interruption in their inexorable deterioration.

In the 24 months of this study over 60 patients, in various stages of acute hepatic encephalopathy, were followed up in five Toronto hospitals, but it was possible to study only 40 of them with sufficient thoroughness to warrant their inclusion in this series. There was an equally large group in whom the diagnosis was made in retrospect, either after the patient had recovered or following the autopsy. Increased awareness and familiarity with this condition as the result of this study undoubtedly improved the ability of the house staff in making the diagnosis. This may be a more frequent cause of neurological abnormalities than has hitherto been recognized and it should always be considered, particularly in patients with overt liver disease.

ETIOLOGICAL CONSIDERATIONS

The etiological factors responsible for the occurrence of acute hepatic encephalopathy in the patients reported here have been divided into two categories: (a) the underlying systemic and hepatic diseases present before the patients developed this complication of hepatic malfunction, and (b) the factors which either precipitated or aggravated this condition (Fig. 1). The specific role played by each of the individual factors in the pathogenesis

Underlying Conditions (40 patients)



Precipitating and Aggravating Factors (45 episodes)

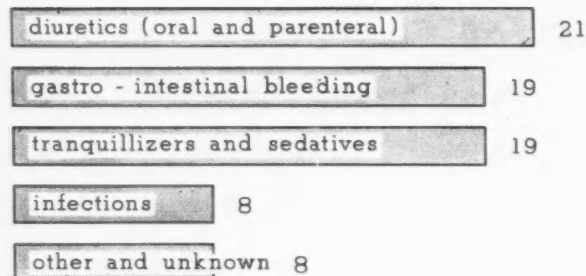


Fig. 1.—The etiological factors responsible for the development of acute hepatic encephalopathy.

of the encephalopathy was difficult to assess because the causes were multiple in all but one of the 40 cases.

The underlying and primary disease conditions are of some interest. Thirty-two of the 40 patients suffered from some form of chronic liver disease. Twenty-two were believed to have alcoholic cirrhosis and five had post-necrotic cirrhosis. Two were found to have hemochromatosis, one had biliary cirrhosis and in four the exact type of hepatic disease was never established. One patient probably had a combination of alcoholic and post-necrotic cirrhosis, and one of the patients with hemochromatosis probably had alcoholic cirrhosis as well. The remaining eight patients had some form of acute hepatitis; three of these were due to bacterial infections and three to viral infections, one had acute anoxic necrosis of the liver secondary to acute heart failure and in one the cause could not be determined.

Surgery was an associated factor in 10 cases. One patient had developed biliary cirrhosis and portal vein thrombosis several years after a cholecystectomy; the patient with acute anoxic necrosis developed acute heart failure two months after open-heart surgery; five developed acute hepatic encephalopathy soon after abdominal operations; and in one, profuse bleeding from the site of biopsy of a rectal carcinoma appeared to be the precipitating cause. In addition, two patients had surgically produced portacaval anastomoses.

In patients with severe liver disease, acute hepatic encephalopathy can be precipitated by surgery in several ways: the preoperative sedation and anesthetic used may be hepatotoxic and impair liver function; excessive bleeding or other factors may cause hypotension and so lead to hepatic anoxia; procedures such as the formation of portacaval shunts or ureterocolic anastomoses may cause

dislocation of the usual pathways of ammonia metabolism; and postoperative complications, either immediate such as infections or fistula formation, or delayed such as serum hepatitis or stricture and stenosis of the biliary tree may lead to a deterioration in hepatic function.

In only four cases could the development of the acute hepatic encephalopathy be attributed, directly and solely, to the hepatic or biliary tract disease itself. In all of the others it was precipitated or aggravated by at least one additional factor. In 19 cases the encephalopathy followed an acute gastrointestinal hemorrhage and in all but five of these either diuretics or sedatives or both had been given prior to or at the onset of the encephalopathy. All of the cases in which the site of bleeding was determined bled from esophageal varices except for the one case in which the hemorrhage occurred at the site of biopsy of a rectal carcinoma. The rate of deterioration, the final depth of coma, the response to therapy and the prognosis did not appear to be related to either the estimated amount of blood lost or to the amount or age of the blood administered during transfusion. Gastrointestinal bleeding not only produces hypotension and anoxia of the liver and brain, but it also provides a potent source of exogenous ammonia. This is produced through the action of the proteolytic enzymes in the intestinal secretions and bacteria on the proteins and other nitrogenous materials in the blood in the lumen of the gut.

Nineteen patients had been given some form of sedation in the 24-hour period before the recognition of their encephalopathy. The sedatives, which included various barbiturates, tranquilizers, meperidine and paraldehyde, were usually given for restlessness, confusion and agitation, or for nausea and vomiting, manifestations which may well have heralded the onset of the encephalopathy. An analogy can be drawn between this state and the various stages of ether anesthesia, where a stage of agitation precedes the stage of unconsciousness. It cannot be overemphasized that caution is necessary when sedatives are administered to patients with liver disease. When sedation is necessary, the smallest effective dose is desirable. This can be best accomplished by the slow intravenous infusion of either a barbiturate (sodium amobarbital, sodium phenobarbital or sodium thiopental) or paraldehyde, until the desired state of relaxation is attained. Although there are certain dangers associated with the administration of intravenous sedatives, the serious problem of overdosage can thus be avoided. Probably all barbiturates and tranquilizers in current use have some hepatotoxic effect, particularly when given to a patient with a diseased liver.

Twenty-one of the 40 patients were on routine diuretic therapy before the onset of the encephalopathy; of these nine also had gastrointestinal bleeding. The diuretics included mercaptomerin sodium, acetazolamide and the newer chlorothiazide analogues. Two patients with marked ascites had their

first and fatal hemorrhage following an excellent response to intensive diuretic therapy. While this may have been fortuitous, there may have been a pooling of blood with an increase in pressure in the portal system, owing to rapid alterations in the intra-abdominal pressure equilibrium states. It is possible too that diuretics, particularly the chlorothiazide derivatives, may influence the hepatic enzymes responsible for ammonia metabolism and so precipitate acute hepatic encephalopathy.

Acute bacterial infections (pneumonia, peritonitis and cholangitis) were present in four patients, while two others developed recurrences of their neurological symptoms following the abrupt cessation of their oral antibiotic therapy. Other less measurable factors included high protein diets, exercise, trauma and acute alcoholism.

CLINICAL FEATURES AND DIAGNOSIS

The clinical pictures presented by the 40 patients in this series were quite diverse. The only consistent feature was the deterioration in the neurological state with an ultimate lapse into stupor or coma. The prodromal period varied from a few hours to several days and was often obscured by such factors as the ingestion or withdrawal of alcohol, sedation and hypotension. Since most of these patients were first seen in acute hepatic encephalopathy, the manner in which they became stuporous or comatose could not be determined properly.

From the histories, the patients could be divided into four groups based on the symptoms and signs noted by the various observers when their clinical states were deteriorating. The syndrome most frequently encountered was an insidiously progressive apathy, lassitude and drowsiness which often occurred in patients who had been in hospital for a long time and which was rarely recognized in its early stages. This was seen in several of the patients who had received diuretics and in a few of the patients with postoperative complications and acute hepatitis. The second most common syndrome was a transient state of restlessness, confusion, aggressiveness, agitation and muscular incoordination for which sedation was frequently prescribed and which deteriorated rapidly into unconsciousness. This was often associated with massive gastrointestinal bleeding. A few patients with acute hepatic necrosis, who developed hepatic encephalopathy, experienced marked nausea and vomiting before other evidences of their serious illness. In three patients who were found unconscious, no history was obtained except that they had suffered from chronic liver disease.

Muscular incoordination, increased reflexes and dysarthria were demonstrable in most patients, although a few had decreased muscular tone and areflexia. The supposedly diagnostic "liver-flap" was seen more frequently in patients recovering from the encephalopathy than in those becoming ill. Grand mal seizures were not uncommon and were

very difficult to control. Fetor hepaticus was not noted in all patients.

The diagnosis of acute hepatic encephalopathy was difficult at times and had to be based primarily on the progression of neurological abnormalities, particularly the deterioration in the mental state, in patients with known liver disease. Clinically it had to be distinguished from the other causes of unconsciousness, particularly cerebrovascular accidents, hypoglycemia, uremia and the alcohol withdrawal state. The finding of an elevated blood ammonia level was helpful in many patients, although there was usually little correlation between the level and the clinical state of the patient.

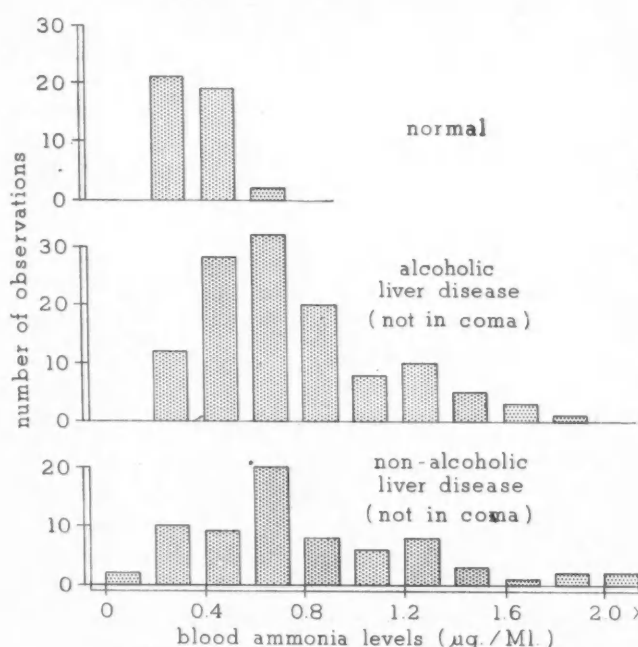


Fig. 2.—The range of blood ammonia levels in normal people and in patients with liver disease but who are not suffering from acute or chronic hepatic encephalopathy (µg. ammonia N. per ml. blood).

Many patients with chronic liver disease were found to have blood ammonia levels up to 1.5 µg. of ammonia N per ml. (normal 0.30 to 0.65 µg.), although they had few signs of neurological abnormalities (Fig. 2), while five episodes of acute hepatic encephalopathy were associated with levels within the normal range (Fig. 3). The suggestion, advanced by several authors, that bleeding from esophageal varices is associated with a marked elevation in the blood ammonia levels^{7, 11, 12} was not always borne out. In six episodes of encephalopathy associated with bleeding from proven varices, blood ammonia levels were below 1.0 µg. per ml.

The treatment, directed by the interns and consultants responsible for the individual patients, was fairly well standardized. All patients who had had gastrointestinal bleeding were given blood transfusions, and most received either oral or parenteral antibiotics or both. Many patients were given purgatives and enemata and a few received steroids. All potentially toxic drugs were discontinued. The arginine-glutamate, which was always withheld

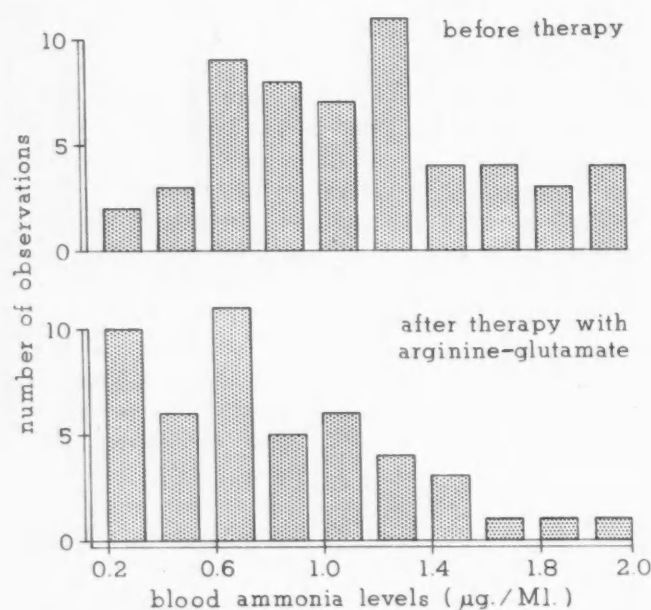


Fig. 3.—The range of blood ammonia levels in patients suffering from acute hepatic encephalopathy before and after therapy with arginine-glutamate (μ g. ammonia N per ml. blood).

until the blood volume was adequately replaced, was often administered at the same time the antibiotics and purgatives were started or the sedatives and diuretics withdrawn.

RESULTS OF THERAPY WITH ARGININE-GLUTAMATE

The depth of coma lessened within 24 hours of starting the infusion of arginine-glutamate in 35 instances, and the patients remained unchanged or continued to deteriorate in 14 instances; two patients died during the infusion. The effect of therapy on the clinical condition is best evaluated by considering three groups of patients: (a) patients with chronic liver disease complicated by

gastrointestinal bleeding; (b) patients with chronic liver disease without bleeding; and (c) patients with acute hepatic necrosis (Fig. 4).

In the group of 17 patients in whom gastrointestinal bleeding was a factor, 17 of the 21 infusions of arginine-glutamate were associated with improvement. The clinical course was complicated by persistent bleeding in the four patients who did not benefit by the first infusion. Two of these patients improved with second infusions given after the bleeding had been controlled and the blood volume had been replaced. The other two died. Of the 20 infusions given to the group of 15 patients with long-standing liver disease and no bleeding, 16 were accompanied by improvement. The diagnosis of acute hepatic encephalopathy was in doubt in three of the four who did not improve; the other diagnoses considered were uremia, cerebrovascular accident and acute morphine withdrawal. The precipitating cause of the encephalopathy was never determined in the fourth patient, although he gradually started to improve two days after receiving this therapy. Only one patient of the group of eight suffering from acute hepatic necrosis showed any improvement after the infusion of arginine-glutamate and this patient did so on two occasions although another subject with this condition improved rapidly when put on large doses of steroids.

TABLE II.—THE PROGNOSIS OF ACUTE HEPATIC ENCEPHALOPATHY OF 40 PATIENTS TREATED

19	died within 6 days of onset of encephalopathy
21	survived this episode
7	died without being discharged from hospital
3	required institutional care
11	discharged to home
2	returned to hospital and died
1	suffers from recurrent episodes of encephalopathy

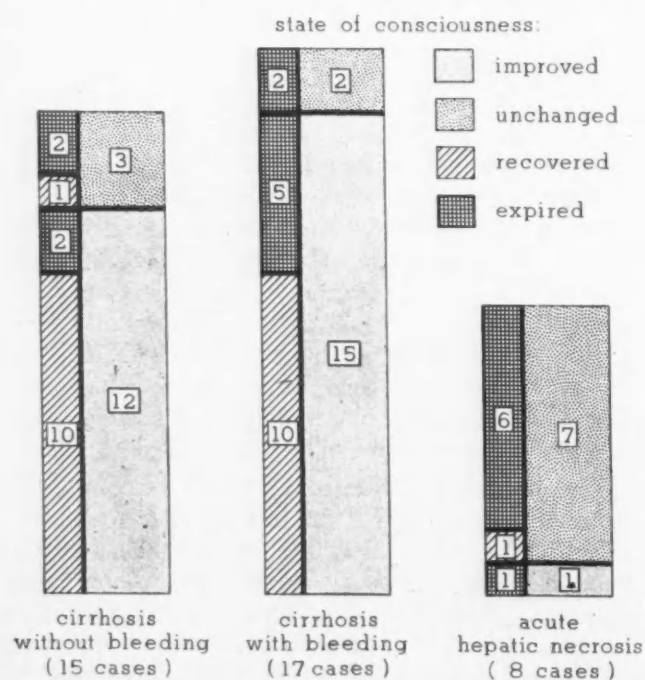


Fig. 4.—The relationship between the etiological factors, the effects of therapy and the prognosis of acute hepatic encephalopathy.

The 32 episodes of encephalopathy which improved following arginine-glutamate therapy occurred in 28 patients, four of whom had two episodes each. One of these four patients became unconscious twice within 36 hours, while the other

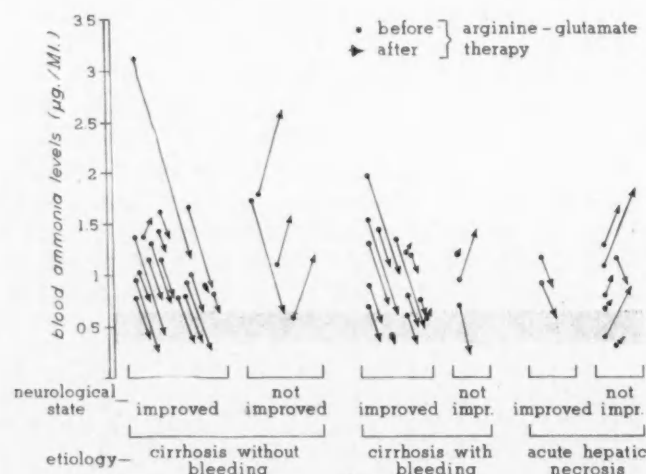


Fig. 5.—The effect of treatment on the blood ammonia levels of the patients suffering from acute hepatic encephalopathy. (The shaded area represents the range of blood ammonia levels seen in normal people.)

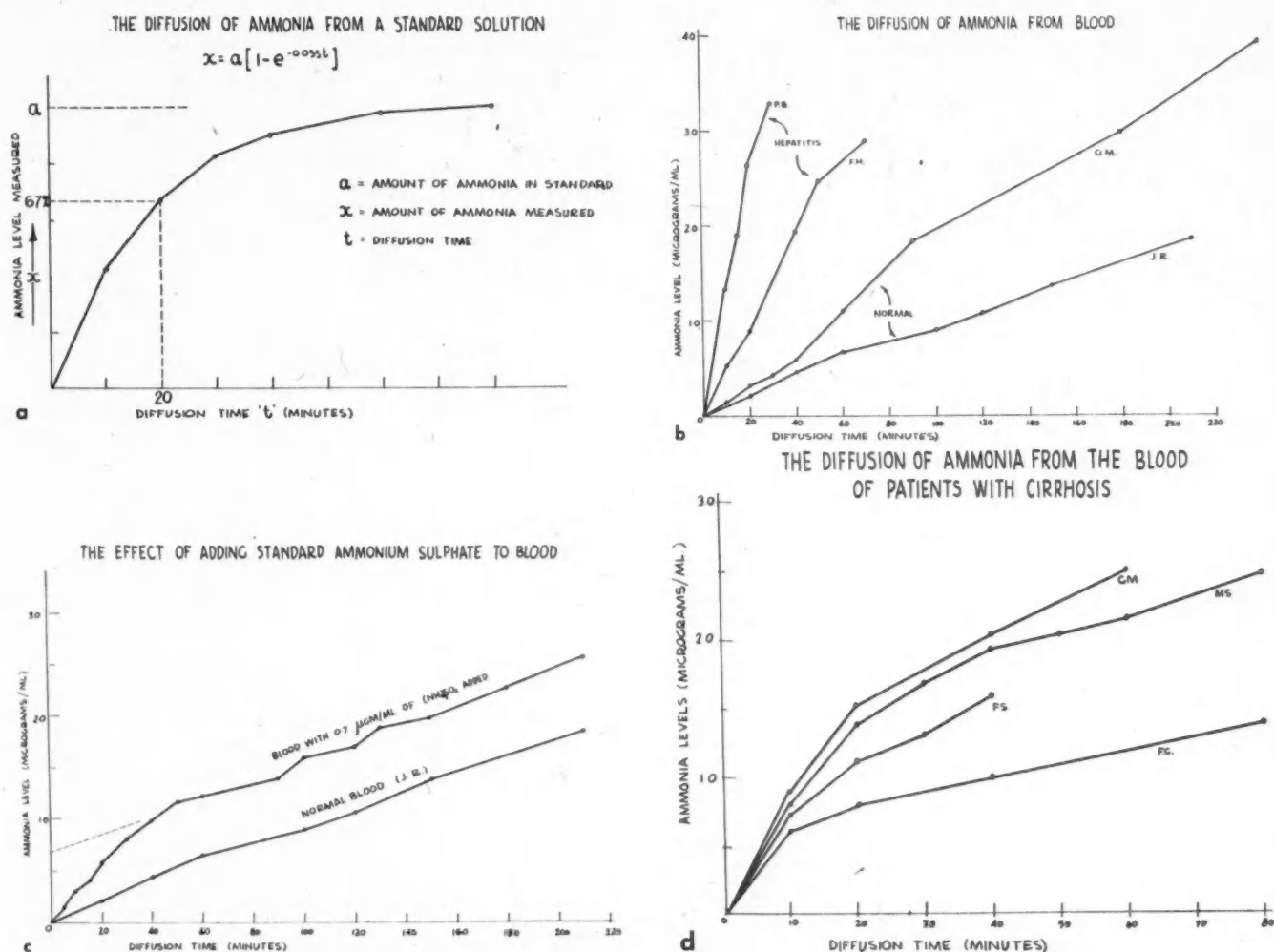


Fig. 6.—The significance of the shape of the ammonia diffusion curve. (a) The effect of varying the diffusion time on the recovery of ammonia from standard solutions of ammonium sulfate. (b) The effect of varying the diffusion time on the blood ammonia levels of people with no recognizable liver disease. (c) The effect of varying the diffusion time on the recovery of ammonia when ammonium sulfate is added to the blood of a healthy person. (d) The effect of varying the diffusion time on the recovery of ammonia from the blood of four patients with chronic liver disease.

three had long intervals between their episodes of coma. In 10 patients the improvement was transient, lasting six to 24 hours before they lapsed into unconsciousness again and died. Five others died of gastrointestinal bleeding while in hospital and 13 improved sufficiently to be discharged, although three required institutional care.

No improvement was noted in 13 patients who received a total of 17 courses of therapy. Eight patients died without regaining consciousness while two eventually recovered and were discharged (Table II). Two patients improved following a second infusion which was given after the bleeding had been controlled, and one patient temporarily recovered consciousness after the second and third infusions of arginine-glutamate.

The blood ammonia levels were measured in 48 instances both before therapy and within 24 hours of starting the infusion (Figs. 3 and 5). It was unfortunate that the technique of measuring the blood ammonia levels had not been perfected when the first patient was treated with arginine-glutamate because she had the most impressive clinical response to this therapy. Two others died

during the infusion period. The levels fell in 34 cases, 30 of which were associated with clinical improvement, and increased in 14, 11 of which did not improve clinically. In the 33 cases in which clinical improvement was noted, 31 were associated with a fall in the blood ammonia levels, while 11 of the 15 patients who did not improve had increased levels. The levels of all but one of the patients with acute hepatic necrosis increased. The amount of decrease in the blood ammonia levels bore no relation to the initial level, to the clinical state of the patient, or to the rate or degree of clinical improvement.

After the arginine-glutamate infusion was stopped the blood ammonia level increased in 18 of the 29 instances in which the clinical improvement was associated with a fall in this level. The level remained constant, or fell further in five and was not followed in six. Recurrences of gastrointestinal bleeding were not always associated with increases in the blood ammonia level, particularly in those patients who were already on neomycin.

The change in the blood ammonia levels was associated with an interesting change in the shape of the ammonia diffusion curve²⁴ in those cases in

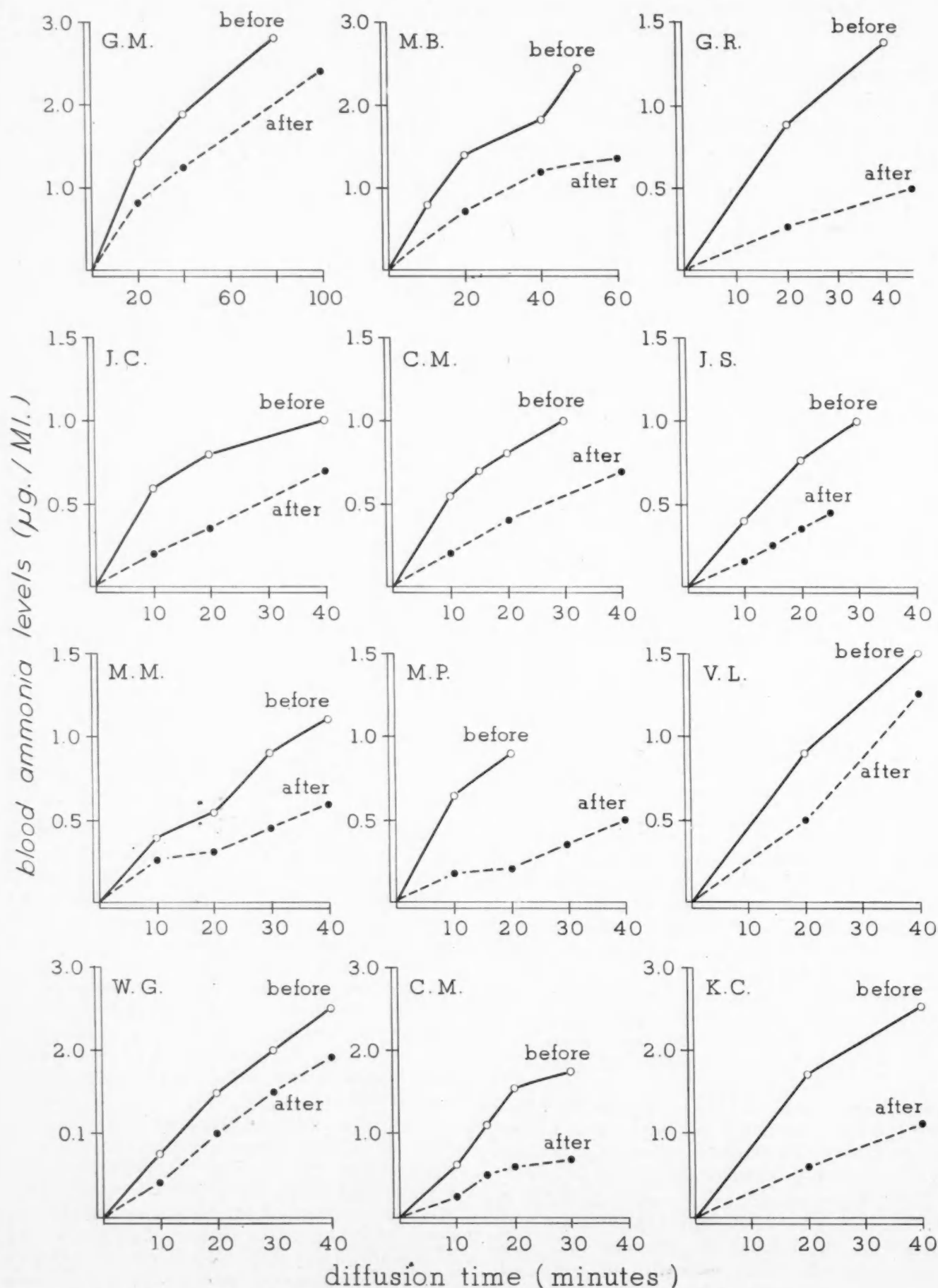


Fig. 7.—The effect of treatment on the blood ammonia diffusion curves of patients suffering from acute hepatic encephalopathy when there was a decrease in the blood ammonia level. (The blood ammonia levels reported in Table I are those measured at a diffusion time of 20 minutes.)

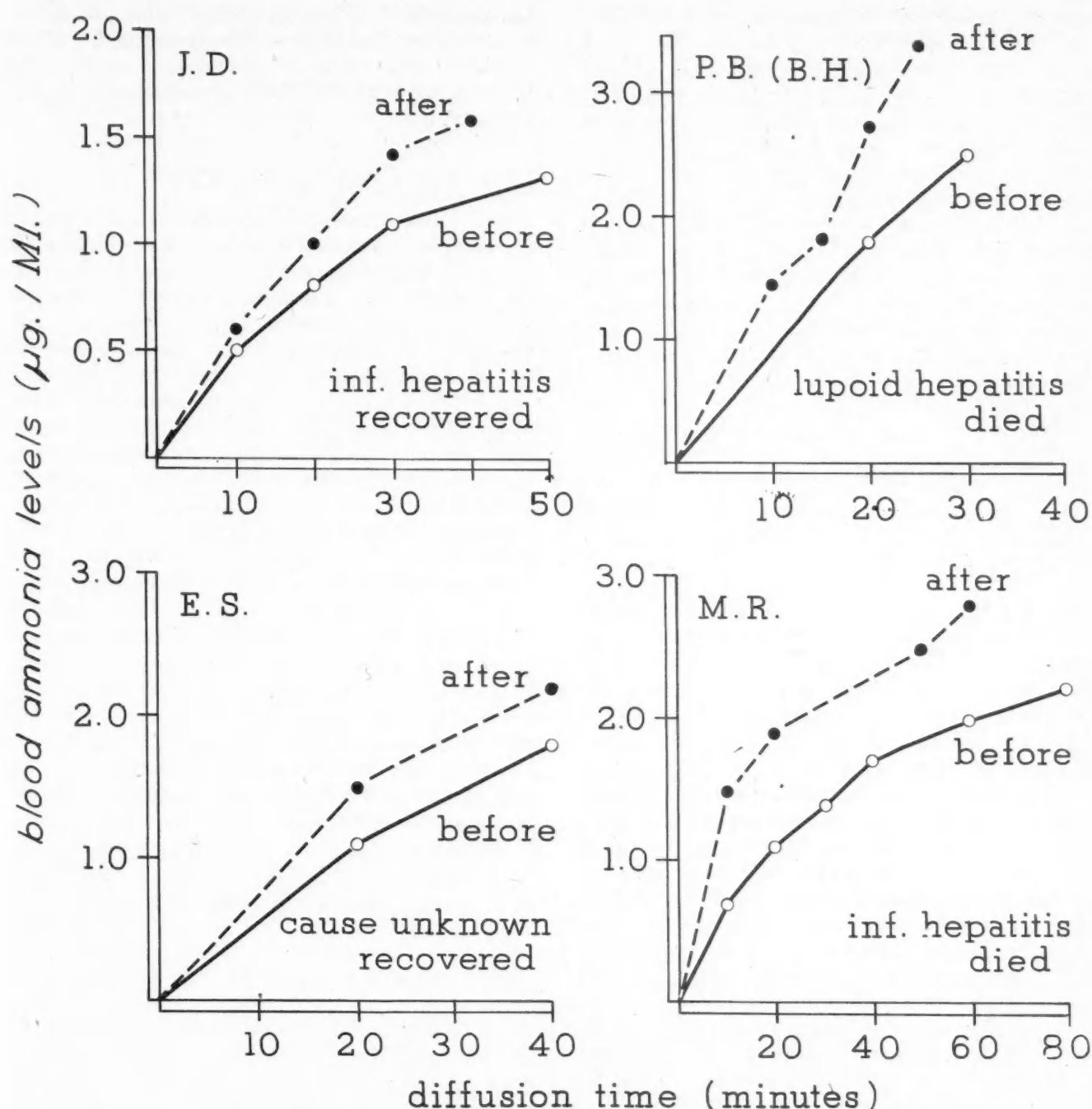


Fig. 8.—The effect of treatment on the blood ammonia diffusion curves of patients suffering from acute hepatic encephalopathy when there was an increase in the blood ammonia level. (The blood ammonia levels reported in Table I are those measured at a diffusion time of 20 minutes.)

which the rate of diffusion of ammonia from blood was investigated. When the percentage recovery of ammonia from a standard aqueous solution of ammonium sulfate is plotted against time, an exponential type of ammonia diffusion curve is obtained (Fig. 6a). If fresh whole blood, drawn from a healthy fasting person, is used in place of the standard solution, a straight line which can be extrapolated back to the origin is obtained (Fig. 6b). If standard ammonium sulfate is added to the fresh whole blood, an ammonia diffusion curve is obtained which appears to be a composite of the exponential curve and the straight line (Fig. 6c). This composite type of ammonia diffusion curve was obtained from the bloods of many patients with

chronic liver disease, particularly if they had high blood ammonia levels (Fig. 6d). All but one of the patients in this series, in whom it was looked for, had a composite type of ammonia diffusion curve.

The changes in the form of the ammonia diffusion curves of the patients in this series, following treatment of the acute hepatic encephalopathy, was quite consistent. The linear factor remained relatively constant while the exponential factor changed significantly. It did not matter whether the blood ammonia level decreased or increased (Figs. 7 and 8). The ammonia diffusion curves of the blood of several patients, particularly those associated with a marked fall in the blood ammonia level

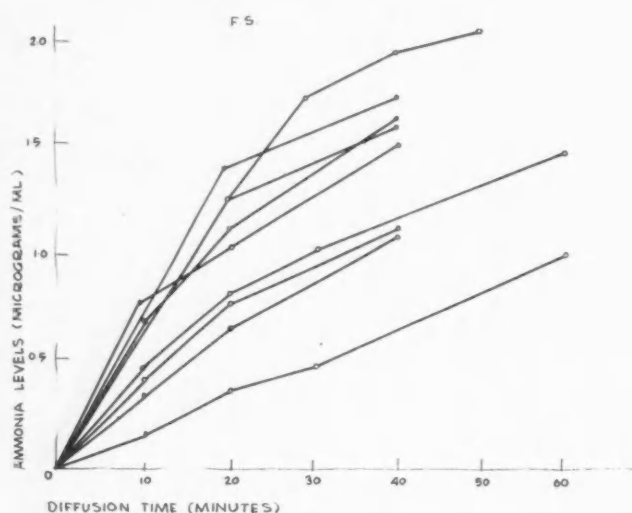
THE RANGE OF BLOOD AMMONIA LEVELS IN ONE SUBJECT
(ALCOHOLIC CIRRHOSIS)

Fig. 9.—The variability of the ammonia diffusion curves of blood, drawn at different times, from a patient suffering from alcoholic cirrhosis, complicated by recurrent bouts of acute hepatic encephalopathy.

following therapy, changed from the composite type of curve to a straight line. A subsequent increase in the blood ammonia level of these patients was associated with a change in the ammonia diffusion curve from a straight line back to the composite type of curve.

When the ammonia diffusion curves of the blood of the patients in this series and of other patients with chronic liver disease were repeated at daily or weekly intervals it was found that the linear constituent of the composite curve remained relatively constant in each patient while the exponential constituent varied markedly (Fig. 9). This exponential constituent, which was influenced by many factors, was often increased by high protein diets, gastrointestinal bleeding, exercise and drugs such as diuretics and sedatives. It was usually decreased or eliminated by fasting, oral antibiotics such as neomycin and chloramphenicol, and by intravenous infusions of arginine-glutamate.

The determination of the two constituents of the ammonia diffusion curve suggests that there are at least two components of the ammonia found in the blood of these patients and that it is possible to distinguish between the two.²⁴ The linear factor is thought to be due to the production or liberation of ammonia by the action of the alkali used in the test on certain normal blood constituents. The identity of the alkali-unstable precursors which contribute to the blood ammonia level has not as yet been established, although it has been suggested that adenosine, adenylic acid and glutamine are involved. The exponential factor appears to be a combination of free ammonia and ammonium ion and is present, as such, in the blood of these patients at the time of shedding. This factor, which can vary in amount in each patient and which can be eliminated by appropriate measures, probably plays a role in the pathogenesis of acute hepatic

encephalopathy. The diagnostic value of differentiating between the two components of the blood ammonia level, and the pathological significance of each, is currently being investigated and will form the basis of a subsequent report.

THE USE OF ORAL ARGININE-GLUTAMATE

The value of the oral administration of arginine-glutamate was assessed in order to see if this would be a suitable therapeutic agent for the small group of patients who suffer from recurrent or episodic bouts of encephalopathy. Of the three patients given this drug orally, two were chronic alcoholics who had never suffered from acute encephalopathy and the third was a man who had had several bouts of encephalopathy. This man was most anxious to find some drug which he could take at home whenever illness threatened. Twenty-five grams of arginine-glutamate dissolved in about 40 ml. water was given along with orange juice to these three patients when they were in the fasting state.

The changes in the blood ammonia levels followed the same pattern in all three patients: they increased by at least 10% within the first two hours and subsequently fell (Fig. 10). The patient suffering from episodic encephalopathy fell asleep soon after ingesting the drug and had nightmares, an occurrence which had never before happened to him in the middle of the morning. In the light of these experiences, although arginine-glutamate is of some value when given intravenously, it is probably not advisable to use it orally. The increase in the blood ammonia levels in these cases may be due to the combined actions

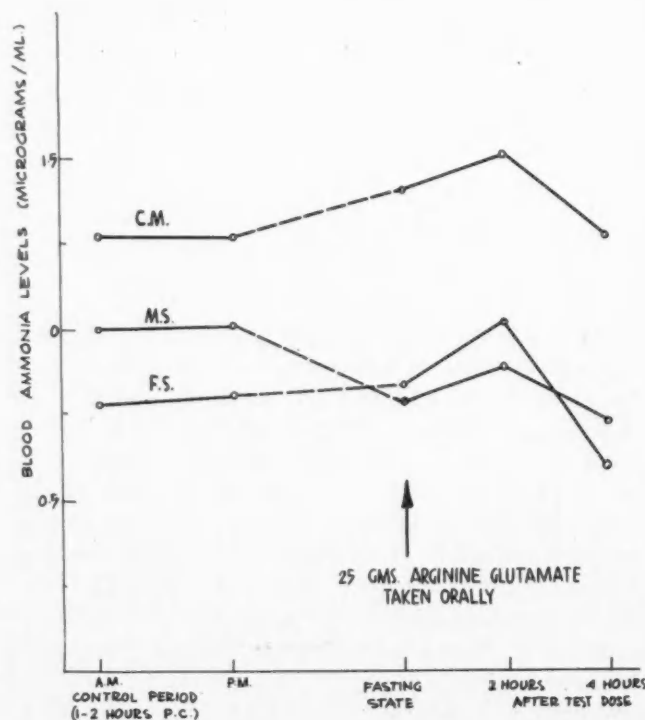


Fig. 10.—The effect of oral arginine-glutamate therapy on the blood ammonia levels of three patients with chronic liver disease.

of the arginine and urea-splitting enzymes present in the intestinal secretions and bacterial flora.

DISCUSSION

The central nervous system, because of its peculiar metabolism and highly specialized function, is very sensitive to minute abnormalities, either excesses or deficiencies, in the circulating blood. At times the brain must be exposed to these noxious defects over a long period as in hepatolenticular degeneration, vitamin deficiencies, and galactosemia, while at other times the clinical symptoms become evident as soon as the abnormalities develop, as in hypoglycemia, shock and the tetany of hyperventilation. However, if these abnormalities occur gradually, the metabolic functions of the brain adjust so that no abnormalities are evident although the system is now extremely sensitive to any sudden change in the level of these compounds. This may explain why some patients with markedly elevated blood ammonia levels have no neurological defects while others with almost normal levels are unconscious.

Although acute hepatic encephalopathy occurs more commonly than many diseases whose pathological pathways of metabolism have been elucidated, the specific etiologic mechanism involved has yet to be identified. There is an impressive amount of evidence to indicate that ammonia or the ammonium ion is important in the pathogenesis of this condition although it is not the only factor. Other factors which are of some importance include: a decrease in the extracellular and intracellular concentrations of potassium ion; the development of alkalosis with an increase in the pH of the blood. This change not only influences the electrolyte concentrations and degree of ionization of the various serum electrolytes but also increases the oxygen-binding capacity of hemoglobin in both arterial and venous blood; and the development of low levels of circulating glucose.

Ammonia can either be absorbed into the body from external sources or be formed in normal or pathological amounts by metabolic processes. The principal exogenous sources are meat-containing diets, ammonia-containing drugs and gastrointestinal bleeding. The endogenous sources are not as well defined and may be primarily associated with defective enzyme functions. These enzyme systems may be impaired by either the disease processes at the molecular level, or by the toxic action of certain chemicals such as acetazolamide and the chlorothiazide analogues which are known to influence the carbonic acid anhydrase enzyme systems, and also possibly by the breakdown products of barbiturates which may inhibit the Krebs-Henseleit cycle. Anastomoses between the portal and systemic venous systems, either naturally occurring or surgically produced, complicate the pathogenesis by allowing ammonia from the gastrointestinal tract to bypass the liver. Other conditions

such as uretero-colic anastomoses and pneumonia also complicate this classification.

If the assumption is accepted that ammonia is the noxious agent, the treatment of acute hepatic encephalopathy involves three main principles: the prevention of further ammonia formation, the correction of the underlying liver disease and the elimination of the ammonia excess already present. Many methods have been used to inhibit the formation of ammonia,²³ including the prevention and control of gastrointestinal bleeding, the elimination of potential ammonia precursors such as blood and meat proteins from the gut, the use of low protein diets, the inhibition or destruction of ammonia-forming organisms by antibiotics, and the avoidance of drugs such as ammonium chloride, the carbonic acid anhydrase inhibitors and sedatives, which either contain ammonia or which may interfere with the normal pathways of ammonia metabolism.

Although specific therapy of the various liver diseases is not usually successful, there are several means of improving the general state of the patient. The most important is the adequate replacement of blood loss along with the restoration and maintenance of the physiological blood pressure in the case of patients who have bled. This will ensure proper oxygenation of the hepatic parenchymal cells and so enable the liver to eliminate the toxic agents as efficiently as possible. Electrolyte abnormalities, particularly alkalosis and hypokalemia, tend to occur and should be remedied whenever possible. Vitamins are indicated for chronically ill or alcoholic patients who may also be suffering from nutritional deficiencies. Adrenocorticosteroids may be of considerable benefit to some patients, particularly those with acute hepatic necrosis.

In the past decade, several chemicals have been used with variable results in an attempt to depress the blood levels of ammonia. The most promising of these are glutamic acid^{9, 13-15} and arginine.^{4, 6, 7, 16} Glutamic acid may combine with ammonia in many tissues to form glutamine which in turn is deaminated by the kidney.¹⁷ Glutamic acid may also be involved with several other metabolic pathways: it may form or aid in the formation of carbamyl compounds which will combine with ornithine;¹⁸ it may be converted to ornithine;¹⁹ it may by a transaminase reaction, help form aspartic acid;¹⁹ or by deamination form α -ketoglutaric acid¹⁷ and so enter the tricarboxylic acid cycle (Fig. 11).

On the other hand, arginine probably acts as a primer in the Krebs-Henseleit cycle. There is some evidence that the citrulline-to-arginine step is a rate-limiting mechanism in this reaction^{20, 21} and that the rate is increased by an excess of citrulline. There is also evidence to suggest that arginine may be more able to pass into the cell than either ornithine or citrulline.²²

Other compounds such as ornithine,¹⁶ aspartic acid¹³ and glucose have been found to be beneficial,

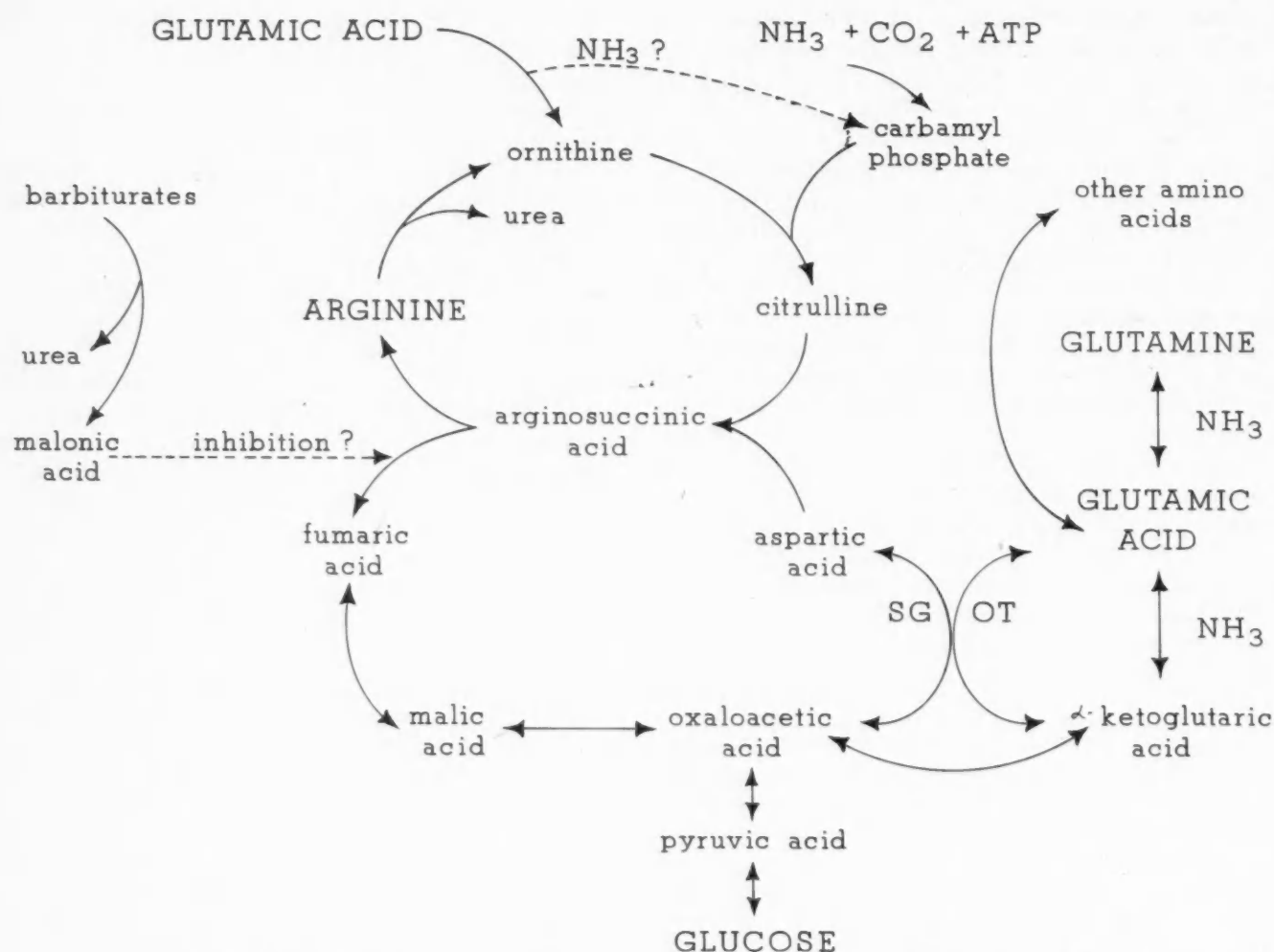


Fig. 11.—The role of the various compounds, used for the treatment of acute hepatic encephalopathy, in the metabolism of ammonia.

and probably all of these agents act in different parts of the same metabolic cycle (Fig. 11).

The administration of large amounts of either glutamic acid as the monosodium salt or arginine as the hydrochloride could lead to further abnormalities in an already precarious electrolyte state. The use of arginine-glutamate obviates this problem and at the same time allows the effective dose of drugs to be doubled. Certain other combinations of drugs may be found which are more beneficial, and effective orally as well as parenterally.

The prognosis of acute hepatic encephalopathy is poor, primarily because of the severity of the underlying disease conditions. There is general agreement that massive acute hepatic necrosis is almost invariably fatal and that only about 50% of patients with bleeding from esophageal varices recover from each hemorrhage. Patients who become unconscious, for reasons other than gastrointestinal bleeding or acute hepatic necrosis, have the best prognosis because the encephalopathy is often induced by factors such as diet, drugs or exercise which can be controlled, and also because there is not usually any further permanent deterioration in hepatic function.

One of the factors that influences the prognosis either in terms of mortality or the degree of complete recovery is the length of time the patient

remains unconscious. If treatment is available, the duration of unconsciousness should be kept as short as possible. This will aid in the management of the patient because it is easier to nurse a cooperative patient than an unconscious one. There is evidence to indicate from the present work that, while arginine-glutamate has little influence on the underlying disease, it will improve the neurological state of many patients suffering from acute hepatic encephalopathy.

CONCLUSIONS

The key to the diagnosis of acute hepatic encephalopathy is a deterioration in the neurological state of a patient with severe liver disease. Familiarity with or awareness of this condition aids in its differentiation from other neurological disorders and it may be a more common type of nervous system disorder than has been appreciated hitherto. Diuretics and sedatives have important and specific roles to play in the pathogenesis of this condition and act either by directly influencing certain hepatic enzymes or by producing a disturbance in the electrolyte and intra-abdominal pressure equilibrium states.

In this series no consistent syndrome of neurological defect could be elicited before coma developed in these patients although the clinical

picture could be divided into four overlapping groups of signs and symptoms. The rate of deterioration was variable and was not attributed to any specific factor. The blood ammonia levels were often helpful in making the diagnosis of acute hepatic encephalopathy but were of little assistance in determining the site of gastrointestinal bleeding.

Most patients with acute hepatic encephalopathy, associated with chronic liver disease, improved temporarily after the infusion of arginine-glutamate and their blood ammonia levels fell. The diagnosis was in doubt or the precipitating factors had not been brought under control in many of the patients with chronic liver disease who were not benefitted. Arginine-glutamate had little influence on either the clinical state or the blood ammonia levels of the patients with acute hepatic necrosis.

Most important in the therapy of acute hepatic encephalopathy are the removal of the noxious agents precipitating the illness, the control of gastrointestinal bleeding and the replacement of blood loss. Arginine-glutamate in doses of 50 to 100 g. should be administered because it plays an important secondary role by improving the state of consciousness. Although it has no effect on the underlying disease, arginine-glutamate may improve the prognosis of the condition both in terms of mortality and in the degree of completeness of recovery of brain function by shortening the period of unconsciousness. If used, this drug should be administered early in the illness.

SUMMARY

Forty patients who experienced 45 episodes of acute hepatic encephalopathy have been discussed with

particular emphasis on the etiology, the clinical diagnosis, the relationship to the blood ammonia levels, the effect of therapy with arginine-glutamate and the prognosis. The results of this study suggest that arginine-glutamate is effective in treating the acute encephalopathy of patients with chronic liver disease when used in conjunction with other forms of therapy.

The co-operation of the many interns and the consultants responsible for the care of the patients in this series, and the advice and help of Professor J. A. Dauphinee, are gratefully acknowledged.

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PAGES OUT OF THE PAST: FROM THE JOURNAL OF FIFTY YEARS AGO

THE INTERNATIONAL SANITARY EXHIBITION

Short reference has already been made in this Journal to the International Sanitary Exhibition now in progress in Dresden. Dr. A. S. Monro, of Vancouver, who recently returned from Germany, has given some information regarding this exhibit, which he characterizes as "the finest exhibition in preventive medicine, sanitary science, and hygiene, ever presented". One of the most interesting buildings is the people's. In it are arranged complete exhibits of all the common infectious and contagious diseases. The history of each is illustrated by collections of old paintings, engravings, drawings, and charts, showing its ravages in olden times. A beautiful collection of wax models gives the clinical appearance of each disease, and pathological specimens from university museums illustrate its morbid anatomy. If the disease is due to a specific micro-organism, this is shown both by enlarged micro-photograph and under the microscope. Where specific, prophylactic, or curative treatment is used, this also is exhibited, as in diphtheria, both the method of manufacture and of administration being shown. All special forms of disease found in workers, such as the various intoxications, skin inflammations, lung and

eye disorders, are set forth in the same manner, with the means used to prevent each.

Many other interesting exhibits are given place in this building. One, by means of charts, statistics, and other methods, shows the amount of alcohol consumed per head by the inhabitants of various countries, its effect upon their physical and social condition, and other information relating to its manufacture and use. Another illustrates the effect of wrong feeding upon infants. In fact, the exhibit is practically complete as an educational means of showing the people the methods of preventing and recognizing the common diseases.

The other buildings are given up to special exhibits—those connected with municipal hygiene and public health, the detection of adulteration and substitution in foods and products, appliances for preserving and keeping free from contamination various foods, and many other phases of this interesting side of hygiene.

Canada was not represented. And yet our high infant mortality, our epidemics of typhoid fever, our toleration of the public drinking cup, make it plain that we have much to learn from such an exhibit.—Editorial, *Canad. M. A. J.*, 1: 884, 1911.

SPECIAL ARTICLE

THE SWING OF THE PENDULUM*

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THE GENERAL purpose of this paper is to show how far we have moved with respect to our ability to do something of therapeutic value for the psychiatric patient. Thirty years ago, even if by some extraordinary happening, a psychiatric centre were to have had a large increase in staff, had the staff then been provided with the very best of existing facilities, there would have been relatively little more that could have been done for most psychiatric patients.

A generation ago, men entering the field of psychiatry found that they could do little for their patients save to insist upon and to enforce a policy of humanitarianism. One could be kind, but one could not greatly help. The depressed patient rang up the long, long, unending days and weeks of his depression—perhaps protected from suicide—perhaps with his insomnia to some extent mitigated—and with his nutrition maintained at least at a survival level. But there was nothing that the psychiatrist could do to bring the depression to an end—any more than he could bring the excitement of the maniac patient under satisfactory control, let alone bring it to an end. The schizophrenic deteriorated. And until 1918, the general paretic went down his way to certain death in a few short years. The vast numbers of psychoneurotics could look for little from us, and at that time there were uncounted numbers of people who showed disturbances of behaviour because of deficiency diseases, which were at that time alike unknown and unnoted.

The beginning of the century saw the start of the development of our modern psychotherapeutic procedures. Since the introduction of malarial treatment in 1918, by Wagner von Jauregg, one treatment procedure has followed another—none of them perhaps perfect: none of them—with the exception of the first mentioned—based on sound etiological knowledge, but all of them contributing something to the cure, and in a few instances, to the actual prevention of mental illness. The entire situation has been completely reversed, so that, now, had we the staff and the facilities, we could do vastly more for the mentally ill than we are doing.

This has brought with it a most astonishing change—not only in the practice of psychiatry—but also in the ways and in the places where diag-

nosis and treatment may be carried out. We can now bring depressions to an end; we can do much to stop the progress of schizophrenia; we can treat our psychoneurotic patients, attaining alleviation for the majority and complete freedom from symptoms for many. We have been so successful in our treatment of general paresis and the behavioural disorders dependent upon deficiency diseases that these conditions have all but disappeared.

Because of all this, the area of treatment of the psychiatric patient is moving out from the mental hospitals into the psychiatric divisions of general hospitals, and, in many instances, out from there into the area of ambulation. This has resulted in an extraordinary growth of the psychiatric divisions of general hospitals, of clinics, of outpatient facilities, and of office psychiatry. Furthermore, it is quite fundamentally changing the function and the structure of the mental hospital.

Our problem today is, in a word, no longer to find something that we can do for our patients, but to find the psychiatrists, social workers, psychiatric nurses, occupational therapists and rehabilitation centres in numbers sufficiently plentiful to carry out all the psychiatric procedures for all the patients, many of whom can now benefit so remarkably and so dramatically.

In an address made in early June of this year before the Third World Congress of Psychiatry, Dr. Walter Maclay, former senior medical commissioner in England, stated that, in consequence of our modern knowledge of psychiatry, in England they hoped to be able to empty 70,000 mental hospital beds in the near future.

With this has come a recognition of the range of psychiatry. There was a time a few decades ago when mental illness was seen as a subdivision of internal medicine; then it acquired status as an independent specialty, and this is its placement in most medical schools today in this country. But as one becomes aware of the multiplicity of forms of deviation in human behaviour and their extraordinary prevalence, the certainty grows that the ultimate place of psychiatry in medicine has by no means acquired so clear-cut a definition as has surgery or internal medicine. As one sees the area of its responsibility unfolding, one begins to suspect that the coming decades will show that psychiatry does not represent simply another discipline of medicine, but it may well prove to be an as yet poorly defined hemisphere.

All of us who are in charge of university and hospital departments of psychiatry have become aware, over the last ten years, of this enormous field in which we must work. The diagnosis, the treatment, the teaching and the necessary research work with respect to the psychoses, neuroses, the organic states, the characterological disorders, might

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well seem to constitute a basis for work for a large enough department in themselves, but in these last several years, there are opening up other fields, some of which promise to be almost as large as those traditional areas of psychiatry.

One may point to the area of mental handicap — ranging from those individuals who are so blighted that they cannot learn to protect themselves against the common dangers, can never learn to read and write—some of whom can never learn even to talk—all the way to those who can be taught simple manual skills and on through to those who with careful training and reasonable location can take an independent place as members of the community.

I have presented this area of defect in terms of social adjustment, but, as we explore this field, we begin to realize that new disease entities are beginning to take form as we uncover new facts. It has long been known that some defects are caused by trauma at birth. Other defects seem to come about because of very early damage to the endocrine system. But a vast number of defects are due to constitutional factors of an extremely subtle nature. We now know that a number of individuals (the size of the number is completely unknown as yet) have what might be called "spot defects". On ordinary rating scales they do well, but, just as some persons may be tone deaf or colour blind, so, for constitutional reasons, some individuals may suffer from highly circumscribed difficulties; for instance, in the manipulation of symbols, in translation of writing into words or words into writing, in the capacity to form adequate body and space images.

Again, if we pass from the field of defect, we find yet another great territory, namely, that of child psychiatry. It is well known that pediatrics has long been recognized and organized as a discipline in itself. This is not true, save in a very few centres, with respect to child psychiatry, and yet the field is certainly no smaller than that of pediatrics.

The psychosomatic field has long been recognized. But largely because of lack of staff, because of lack of an adequate definition of the field, and perhaps also because of a lack of adequate therapeutic procedures, we have not yet succeeded in establishing this as a separate discipline within psychiatry.

Still other areas deep in human behaviour are being opened up, among them being forensic psychiatry, industrial psychiatry and the psychiatry of the older years of life. And I need hardly mention the almost untouched field of the rehabilitation of the psychiatric patient. Yet those extraordinary things which can be done for the amputee or for the sightless can also be done by the same methods of long patience and imaginative retraining in the case of the psychiatric patient who has some lasting damage.

The purpose of drawing attention to the enormous range covered by psychiatry is to demonstrate the exceptional need for more personnel and more facilities. Thirty years ago, if we had the tools, they were so weak and so inadequate that there was little we could do even had they been provided to us. Today the tools are sharp and powerful, and the door is open for the development through research of still more adequate methods of treatment. It was true thirty years ago that the community had little or no recourse in the management of psychiatric illnesses. Today it is true that the community *has* recourse, if it will use it. It is true to say that the lot of the psychiatric patient thirty years ago was miserable and largely hopeless. Today the future of the man or woman who suffers from psychiatric illness can be almost as good as we will make it—if we are determined to see that the present resources of psychiatry are used to the utmost and that such resources are expanded by the development of research lines which are falling open before us with the greatest promise every day, every month of the year.

* * *

We now come to a review of those areas of outstanding need and promise in psychiatry, and there are few areas more important than the area of early recognition of mental illness. This is true of illness in general, but in the case of mental illness with its often insidious onset, early recognition is particularly important. It is also particularly difficult, and for two reasons: firstly, there is reluctance on the part of relatives and the patient alike to recognize the existence of mental illness, and, secondly, it is difficult because there is an astonishing lack of basic information about mental health or mental illness, or, more properly stated, there is an astonishing amount of misinformation.

There is a great rift in our concepts about what people actually do and what they are supposed to do. This results in two most serious consequences. The first is that many people do not really know what is common experience in certain fields of vital importance—in the sexual field, or with respect to the occurrence of variant behaviour—or how common it is to have periods of depression, periods of suspicion, feelings of guilt, impulses to violence, longings for suicide or domination by compulsive urges. The second thing is that in so far as it is the common desire to conform, most people attempt to conceal any of these experiences which they themselves may have had and have feelings of guilt about their discovery.

All this simply tends to perpetuate and even to extend the gap which lies between our beliefs of what people do and how they actually live from day to day. There is no better instance of this than the sexual life of the human being. Barely three decades have elapsed since we were at a period when it was universally believed that masturbation was a sign of degeneracy. It is only with the

coming of the great questionnaires and the great surveys which have been carried out with increasing accuracy that we have learned to recognize that masturbation is a universal phenomenon. The range of homosexual experiences was also unknown until comparatively recently. Those whose concealment was torn aside, and who were discovered to have had a homosexual experience or to be masturbating, were at once made to feel extremely guilty, different from the rest of humanity and somehow peculiar. Now much of this is gone, but there still remains a most unwholesome covering up of much perfectly normal sexual interest and sexual activity.

Contrariwise, we still give quite favourable descriptions to what are actually pathological patterns of behaviour. For instance, we not infrequently term an individual an incisive straight-from-the-shoulder, down-to-earth sort of person, who is actually a deeply sadistic individual who gets his pleasure from injuring others. Again, we pour out sympathy on martyristic individuals who are in reality inflicting their damaging behavioural patterns on their children—rendering them guilty and lacking in confidence.

It is common knowledge that our much admired tycoons are often the poorest of fathers and our socially prominent hostesses are, sometimes, mothers whom their children never see.

The early schizophrenic, however, is sometimes seen as a rather retiring, other-worldly person at the very time when there are signs of his disease clearly evident to the informed eye. Society gives a kind word for the overly nice woman who will neither do, nor speak, nor see any wrong. Equally well received is the person who keeps everything to himself or to herself. The public is quite oblivious to the fact that to talk things out is one of the surest ways to preserve one's equanimity. Indeed, all of these individuals are heading sooner or later towards disasters, minor or major.

Hence, I would say that, above all, we need continual public education. This should start in the schools with a presentation to the school child of the basic facts of relationship between people, of the importance of the emotional life, together with a description of the kinds of healthy people and unhealthy people he is likely to meet.

This matter of public education is placed first in the list of areas where we need personnel, since we have before us a remarkable record of what has been achieved through education regarding public health—education concerning the desirability of a clean water supply, proper clothing, diet, clean food supplies and adequate living quarters. The illnesses, both minor and major disorders, which plagued earlier generations have not been so much cured as simply swept away by a better design for living.

Nowhere is this more greatly needed than in the field of human behaviour. We all suffer from unnecessary degrees of anxiety, unnecessary tensions

and guilt feelings. We are all at the mercy of contact with damaged persons from day to day. Our children are still exposed to the danger of being brought up by persons who are unfitted because of serious personality defects: and, everywhere, throughout our everyday life, people who have emotional problems of varying degrees of seriousness, make judgments which greatly affect us.

We now have the beginnings of knowledge of how to deal with these problems, but we do not have the number of personnel necessary for these public education programs, nor do we as yet have the necessary support.

Turning to this in a rather more specific way, our next need is to strengthen the field of social psychiatry in terms of providing chairs at the university in social psychiatry and adequate financing of such divisions. While we do have considerable information—which would allow us to start now—on public education, there do remain great problems, such as the impact of various kinds of social sanctions and social motivation which require prolonged research efforts for their solution.

The next field which I would like to discuss is one in which we could do a great deal more if we gave leadership to existing public support and thus obtained the necessary resources for both material and personnel. It is that of rehabilitation. I have already referred to the extraordinarily fine work which has been done in the rehabilitation of physical defects among individuals who have lost an arm or a leg, in retraining the sightless, in developing occupations for those who have cardiac or pulmonary damage, but relatively little is being done in retraining those whose acute psychotic illness has gone by but who have residual defect. For instance, we have with us at the Allan Memorial Institute at the present time a young man of exceptional ability who has suffered from a schizophrenic breakdown. The schizophrenia, for all practical purposes, is over, but some degree of damage remains. And because his illness has gone on for a long time, he is only too apt to fall into dependency upon others. Our problem essentially is one of retraining him, of finding a centre which would take him in and, starting with simple things, retrain him to a point where he could undertake a job commensurate with his real abilities. But when we look for a suitable location, or when we look for an adequately trained psychiatrist for this purpose, there are relatively few. Most of our psychiatrists are still being trained primarily for short-term intensive work or for long-term work with psychoneurotic patients.

I should like now to turn to a different kind of situation, and that is our recognition of the fact that, despite many of the theories of the extraordinary beginnings of neuroses—theories which have become almost farcical in their insistence that the beginnings may actually be in the uterus—in actuality many of the practical difficulties that the psychoneurotic patient has after leaving hos-

pital and going back home after treatment, stem from his own home. It is there that the attitudes of the people with whom he has lived during the beginnings of his illness are only too apt to provoke his old neurotic behavioural patterns into operation again. In other words, many of our mental patients are sent back to what may be termed "neurotogenic homes".

We have, for example, another young man with as who suffered a head injury, was unconscious for a period of time, and then declared that he had forgotten everything. It was not just a matter of forgetting events subsequent to or for a short time prior to the accident, it was a matter of forgetting where he had been born some 25 years ago, his school days, his early girl friends, his first set of long pants, and all the facts of those first 25 years. We were convinced that this was a psychological phenomenon and not an organic one, and very soon we were able to illustrate this. By giving him intravenous sodium amytal, we were able to bring back all of his recollections. Subsequently, however, and particularly when it was time to send him home, we found that his mother was absolutely determined that her son was her little baby boy and that she was going to treat him accordingly.

To offset this kind of thing what we need are placement homes where individuals who are getting over their psychoneurotic illnesses, and are learning more socially acceptable ways of behaviour, can live until these new and more adequate patterns are fully re-established.

* * *

During the first part of this paper, I have emphasized the extent to which possibilities of diagnosis and treatment have opened up to us our great need for further expansion of our methods of applying what we know. In all honesty, it must be stated that some of the remedy lies in the hands of the psychiatrists themselves. Consider these two points: We still find a number of psychiatrists who are quite unprepared to use the full armamentarium of diagnostic and therapeutic agents available to them. Some of them, for instance, are not willing to use psychological tests, others are not prepared to carry out physical examinations, still others are not prepared to use psychotherapeutic procedures and others are not prepared to use anything else but psychoanalytic or psychotherapeutic procedures. In other words, they are not willing to accept their full responsibilities as psychiatrists.

This is a matter which must be taken most seriously, and the American Psychiatric Association is taking the matter in hand to the extent that the whole procedure of postgraduate training in psychiatry is to be reviewed in 1962 at a special series of conferences.

While these criticisms are most often levelled at psychiatrists working in private practice, they are equally true of psychiatrists working in certain mental hospitals. Indeed, there are mental hos-

pitals with which I have acquaintance, where it is almost useless to send patients since—despite the limitations of staff—they are under-treated or treated by only one method and not by other methods equally available to the psychiatrist.

The second criticism which I would make is that we should be aware of the fact that whether it is in psychiatry or in surgery, in medicine or in gynecology, a relatively unknown factor may make a great difference to the outcome of a case. This fact is not the suitability of the treatment to the disease, nor the co-operation of the patient, nor the skill of the physician, but lies in the determination, the patience, and the capacity of the physician for long and sustained effort. Too often one sees that the psychiatrist feels that his responsibility to the patient ends as soon as the major symptoms disappear. There is little recognition of the fact that most psychiatric patients require long, continued support, whether psychotherapeutic or otherwise.

We have found at the Allan Memorial Institute that we have been able greatly to increase the efficacy of our psychotherapeutic procedures and substantially reduce our readmission rate by the development of follow-up services. These follow-up services are, in the first instance, applied to psychoneurotic patients who are discharged from the Institute and are followed in group and individual psychotherapy over prolonged periods of time. We also have a follow-up service for those with recurrent depressions. Any individual who has had at least three depressions in his life is given the opportunity of being put on a five-year follow-up plan, whereby he returns once a month during the first three years, once every second month during the fourth year, and once every three or four months during the fifth year, to the Day Services of the Institute and he is given one electroshock treatment at such times. This we have found to be of exceptional value in cutting down relapses and, apparently, in terminating or greatly reducing the tendency to have further manic or depressive attacks at the end of the five-year follow-up plan. The same we have found to be true of our schizophrenic patients who are followed at monthly intervals for two years after discharge, and their re-admission rate has been reduced greatly. Follow-up therapy in the case of the schizophrenic sometimes involves electroshock, sometimes chemotherapy and sometimes a combination of both. We are presently exploring the possibility of developing a follow-up service for our aged patients on the same basis.

With this, of course, goes a particular concern over the patient's social adjustment, and our Social Service Department, as well as our medical divisions, remains actively involved in providing assistance to the patient over the periods of time already specified.

We hope that these follow-up techniques will be still further strengthened in coming years with the

development of sheltered workshops and foster homes for discharged cases and the development of what was mentioned earlier, namely, adequate rehabilitation centres for psychiatric patients.

* * *

Despite these final criticisms, we should keep before us the fact that at long last the door is open to us to do far more for our patients than we could possibly do in previous years; that many of the illnesses which were viewed as condemning the individual to a hopeless future can now be greatly mitigated and sometimes entirely overcome.

We can be aware that we stand now at a most favourable period in the development of psychiatric services for the mentally sick. The public is clearly deeply and widely concerned to see that such services are provided. No clearer demonstration of this could be given than the extraordinarily strong support given to the proposal by Mr. Alan Macnaughton before Parliament on December 5, 1960, which was that "the government should consider the advisability of co-operating with the provincial authorities and such professional and other groups as may be interested, in making a

national survey of the extent of mental illness, its causes, problems and methods of treatment". The leaders of all parties in the House spoke in endorsement of the motion, and many other members were moved to speak on the basis of their own observations and to support this wise suggestion.

Moreover, at this moment, the Government of Canada has before it a report of a committee set up by the Government itself to study the financing of medical research by Government departments. This document, known as the Farquharson Report, shows very clearly that this country lags far behind other smaller and less prosperous countries in the development of its medical research and that, among other major factors, is the lack of adequate financial support.

The times are propitious. The pendulum has swung. But in order that the patient may reap the fullest possible benefit from measures now available and from the promise held before us by the fostering of research, it is necessary that medical men everywhere—psychiatrists among them—give the most vigorous possible leadership to the formation of public opinion in this country.

CASE REPORT

READING EPILEPSY

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IN 1956 BICKFORD and others reported eight cases of epilepsy precipitated by reading, and 18 examples of the disorder called "reading epilepsy" have now been described.¹⁻⁶ This is a report of another instance of this unusual condition.

This patient, a 26-year-old student of architecture (referred by Dr. C. A. Brumwell), is the fourth of eight children. One older and two younger siblings have suffered from seizures, and another younger sibling has mongolism. The patient's first attack of loss of consciousness occurred at the age of 24 years, and it was his first illness. He was then at the head of the third-year class but has since failed three times to complete the fourth year. Attacks have occurred at irregular intervals, always whilst reading and usually when he was tired or studying hard.

As he reads, concentration becomes difficult, and then his lower jaw begins to jerk; with further reading the jerks increase and comprehension lessens. He knows that an attack will occur if he persists, and yet he usually does so. Then follows a moment when everything seems wonderful, after which he loses conscious-

ness. Afterwards he feels dull and depressed for several days.

Professional reading is usually to blame, novels rarely. Television, bright lights, writing and designing have never precipitated such attacks, to his knowledge.

He suffers too from periods of dullness lasting one or two days during which he is listless, unable to concentrate, and prone to sleep for many hours. If he tries to read, jaw jerks quickly appear. There may be several such episodes in a month or he may be free from them for three months at a time.

A third complaint is of increasing difficulty with his work, in contrast with his earlier academic success. Thinking along broad lines has become difficult for him, designs must be made step by step, and the point of an argument is lost in its evolution. These difficulties, he maintains, are not due to nervousness and he is more efficient when nervous.

On examination there were no abnormal neurological signs. The cerebrospinal fluid was normal, as were skull radiographs. Electroencephalograms were abnormal (see Figs. 1 and 2). During the resting recording, the alpha rhythm was dominant, with only occasional slower waves. During overbreathing, slow activity was increased and random sharp waves occurred. Photic stimulation was without effect. A rotating drum evoked optokinetic nystagmus but no electroencephalographic (EEG) change. On three occasions the EEG was recorded during long periods of reading, two without effect, and the other followed by increased EEG abnormality. After three hours of reading, irregular jerks of the lower jaw and twitching of the upper lip

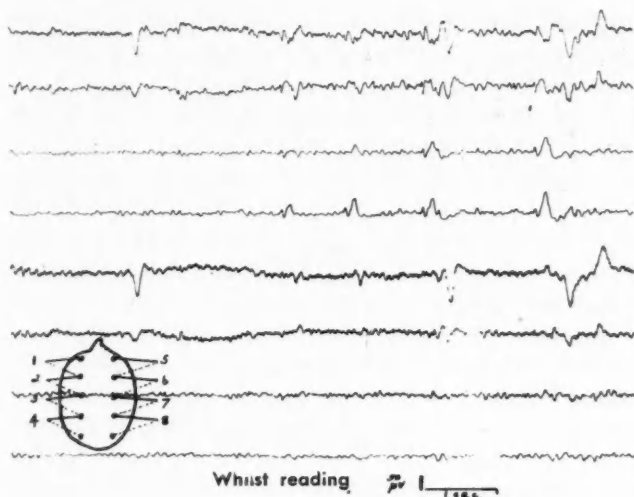


Fig. 1

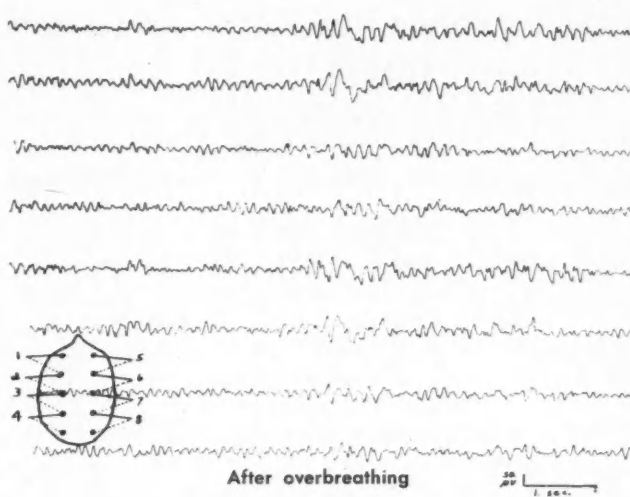


Fig. 2

began, and the EEG then showed paroxysmal slow and sharp wave activity, maximal posteriorly, and more marked on the left side than the right. During the period of jaw jerking he blinked his eyes frequently and strongly, though apparently voluntarily.

Psychometric examination (by Dr. Klonoff) suggested that this young man had a full-scale I.Q. of 126, which was probably an underestimate. On the memory scale the quotient was only 114. With perceptual tests he was very accurate but unusual in his approach: he made preliminary outlines of even simple drawings, and treated plain designs as major architectural tests. Projective tests showed imagination and breadth of association. There were no clear-cut signs of thought disorder or schizophrenia.

The patient has been given diphenylhydantoin (Dilantin) whilst under our care but there is no clear evidence of benefit from it. Jaw-jerks may still occur with reading, but there have not been any major attacks during the past eight months.

DISCUSSION

In the reported cases, reading-induced seizures have been described as focal in origin, petit mal, or generalized convulsions. The EEG changes too have been focal or generalized. Thus the seizure varies conventionally in type, and the one common factor is reading: and yet most epileptics read unharmed.

Several suggestions have been made to explain the excitatory action of reading: (1) The involuntary jaw-jerking in some patients may be an exaggeration of normal silent articulation, and may

lead to an afferent proprioceptive train from the jaw muscles. (2) The quick eye movements from line to line may evoke similar afferent stimuli from eye muscles. (3) The pattern of the printed page may act as a photic stimulus. (4) The concentration required to read, or the emotional impact of the subject matter, may be important.

One or more of these mechanisms could apply to most epileptics who read, and clearly something more is needed before reading epilepsy will occur. Critchley, Cobb and Sears⁵ have made the reasonable suggestion that a certain few patients acquire a conditioned sensitivity to the afferent stimuli from reading, and epilepsy may then occur.

SUMMARY

A case of "reading epilepsy" is described, with coincident electroencephalographic changes maximal in the posterior part of the dominant hemisphere. Reference is made to the 18 cases previously reported, and to the theories proposed to explain this rare phenomenon.

750 West Broadway,
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PAGES OUT OF THE PAST: FROM THE JOURNAL OF FIFTY YEARS AGO

The practice of medicine is what it is, not by any fortuitous circumstance or conscious direction, but because it has grown up under the necessity which men experience for relief from pain, from the dread of death, and for aid in the struggle for existence in an environment where other organisms also are rightly striving to live. And him we

call the father of medicine who first rescued the practice of it from slaves and hirelings and made it worthy of free men. At various times medicine has become degraded again from a profession to the status of a trade. Those times we call the dark ages.—*Canad. M. A. J.*, 1: 886, 1911.

THE CANADIAN MEDICAL ASSOCIATION
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VINCALEUKOBLASTINE

THE results of treatment of cancer patients with any new drug are of great interest to the clinician and the experimentalist. This is particularly so if the agent used is not chemically related to those presently employed, or if there is evidence that it may exert a new type of action. Vincaleukoblastine (VLB), an alkaloid extracted from the plant *Vinca rosea*, was first isolated in the Collip Medical Research Laboratory at the University of Western Ontario and is presently under extensive studies for its possible use in the treatment of cancer. Preliminary observations by both American and Canadian workers were reviewed at the Canadian Cancer Research Conference¹ at Honey Harbour in June 1960, and indicated that further investigation of the effects of this agent should be undertaken.

The results of studies by two separate groups of workers in Toronto and Vancouver are reported in this number of the Journal and present an extensive series of cases now examined. These results are of considerable importance in that they suggest that certain types of malignant disease, particularly Hodgkin's disease, are especially responsive to treatment with VLB, and also since they indicate that the drug may be effective even though resistance has occurred to other forms of treatment. VLB exhibits a marked action on the hematopoietic tissues even after a single dose, and this may be a limiting factor to the dosage which may be administered. Characteristically, however, bone marrow recovery is rapid and a cumulative depression of the white blood cell count does not occur when repeated doses are correctly spaced. Favourable responses to treatment have varied in their duration but the optimum type of maintenance therapy has probably not yet been established.

The discovery of vincaleukoblastine by the Canadian research group has been cited to empha-

size the role of chance, or serendipity, in experimental research. The plant, *Vinca rosea*, the common annual periwinkle, had enjoyed a popularity for many decades as the ingredient of a brew used as a family medicine for the treatment of diabetes mellitus. The initial interest in this plant, therefore, was to investigate orally administered extracts for their possible antidiabetic effects. During the course of these essentially negative investigations it was noticed that the injection of some fractions resulted in the rapid death of rats, apparently from overwhelming infection. Further experiments showed that there was an associated depression of the white cell count and marked destruction of some elements of the bone marrow. These effects were so marked, even after a single injection of the extract, that they were used initially as a biological assay method in attempts to chemically purify the active agent. With the observation that the white blood cells could be influenced, the problem then became at least of theoretical interest in the study of leukemia. The isolation of VLB as one active fraction of the plant allowed more extensive studies with this pure alkaloid. Its effect on bone marrow was pronounced, since as little as 0.3 mg./kg. in the rat caused a depression of the leukocyte count, in which granulocytes were virtually absent. Curiously enough, the action seemed to be quite specific, as platelets and megakaryocytes were unaffected. Similarly, despite the common deleterious action of many other agents on the gut, VLB showed little evidence of any such destructive action.

Tumours in experimental rats and mice were readily shown to be checked in their growth by doses of VLB which were well tolerated by the animals. In some cases apparent cures were observed. Although various mouse leukemias responded favourably, as might have been anticipated, a number of solid tumours were also affected. Circulating tumour cells seemed particularly sensitive to the action of VLB. It seemed well justified at that time to turn to cautious use of this alkaloid in advanced cases of cancer in humans. As supplies of such an alkaloid, present in only minute amounts in the plant, would rapidly have become a limiting factor, it was fortunate that Eli Lilly and Company also had been interested in the possible antidiabetic properties of the plant and had initially screened some extracts against mouse leukemia. With the publication of the method of isolation of VLB,² supplies were quickly made available for experimental clinic testing ("Velban" in U.S.A.; "Velbe" in Canada—Eli Lilly and Company).

Extensive series of clinical cases have now been treated with VLB in various centres, and such studies will no doubt continue to be the subject of further reports, in due course. The final assessment of the usefulness of VLB as a form of therapy for cancer must await further investigation. From the point of view of the experimentalist a number of points of interest have clearly emerged. Most

patients treated with VLB have previously 'escaped' from other forms of chemotherapy. Enough cases have responded to VLB to imply strongly that its mode of action must be by some new route. This offers the possibility of more effective combination or sequential types of therapy. In both experimental and clinical studies, mitotic metaphase arrest has been noted following VLB administration. Some evidence, however, indicates that this may not be its primary means of anti-tumour action. The action of VLB is curiously specific. Little evidence of a reduced platelet level has been encountered in patients who have received this drug, and gastrointestinal symptoms have not indicated the occurrence of destructive lesions of the mucosa. In the rat, regeneration of an organ such as the liver may proceed rapidly, although destruction of the bone marrow may take place simultaneously. The many types of malignant disease in humans which have shown regression, even if for only a brief period, suggest that this alkaloid may be affecting some process common to many forms of cancer. Why certain cancers are more susceptible or have longer remissions after regression remains an enigma, particularly since some solid tumours may be as responsive as the leukemias.

The mode of action and metabolism of VLB still await clarification, and will be speeded, particularly through the use of the isotopically labelled alkaloid. The discovery of some means of selectively protecting the bone marrow might allow the use of larger doses of VLB to exert a greater action on solid tumours. Further chemical studies are imperative, since the possibility exists that similar alkaloids may be isolated or that additional derivatives may be prepared which may have a qualitatively or quantitatively different action on malignant diseases not significantly affected by VLB.

R.L.N.

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OPPORTUNITIES FOR TRAINING IN RHEUMATOLOGY

NOT so many years ago the field of chronic rheumatic diseases held little or no attraction for the bright young graduate faced with a choice of careers in medical research or specialty practice. By and large, the attitude of the orthodox profession towards the unfortunate victims of this crippling and disabling group of diseases was all too often one of therapeutic nihilism, more than a few vestiges of which, it must be said, still persist. Gradually, however, since the First World War, the attitude of the profession towards this area of medicine has changed. Subtly and almost im-

perceptibly at first, this mounting interest in the rheumatic diseases gained momentum, stimulated by the contagious enthusiasm and intelligent guidance of such dedicated pioneers as van Breemen, Kahlmeter and Forestier in Europe; Fox, Sir Humphry Rolleston and Lord Horder in Britain; Pemberton, Wilson, Osgood, Haden, Cecil, Minot, Sturgis, Zinsser and Hench in the United States; and A. A. Fletcher and Wallace Graham in Canada. Eventually the study of the broad spectrum of rheumatic and connective tissue diseases expanded to the extent that it has become a full-fledged scientific discipline, in most centres as a subspecialty within the compass of internal medicine.

As was ever the case, when professional interest focuses on a particular segment of medicine, the inevitable result is that the disciples of this study band together to form a specialist society. In the mid 1930's the herd instinct of North America's rheumatologists expressed itself in the creation of those organizations now known as the American and Canadian Rheumatism Associations, both of which have since flourished and spread themselves like the green bay tree of the Psalmist. Worldwide concern with the medical and paramedical problems created by rheumatic and allied diseases is evidenced by the fact that similar specialist societies of national scope now exist in most major nations. The intense concentration of clinical and basic research in this field of medicine is reflected in the breadth and magnitude of subject matter which bulges the seams of the scientific programs of the International Congresses on Rheumatic Diseases, the tenth of which will be held in Rome about the time that this editorial appears in print.

The factors that have influenced the explosive expansion of interest in the rheumatic diseases since the Second World War are many and complex. Undoubtedly, one of these was the Nobel prize-winning discovery by Hench and Kendall, that certain steroids from the adrenal cortex could dramatically reverse the inflammatory manifestations of some of the rheumatic diseases.

Mounting concern over the magnitude of the problem posed by the ever increasing number of persons incapacitated by chronic illnesses and disabilities of all types, and the resulting ferment of activity in the broad field of rehabilitation of our disabled fellow citizens, likewise intensified professional and public interest in the plight of those who suffer from rheumatic disorders. In this relatively favourable atmosphere of general public concern the Canadian and American Rheumatism Associations began negotiations with appropriate government authorities and other interested groups which culminated in 1948 in the creation of the Canadian Arthritis and Rheumatism Society (C.A.R.S.) and its counterpart, the Arthritis and Rheumatism Foundation (A.R.F.), in the United States. The C.A.R.S. and A.R.F. are voluntary, non-profit, medico-lay organizations dedicated to the furtherance of research, professional and public

education, the improvement and expansion of facilities for prevention, diagnosis, treatment and rehabilitation in the broad field of rheumatic disorders, and the raising of funds for these purposes. Shortly after the A.R.F. was founded, the U.S. Department of Health, Education and Welfare established the National Institute for Arthritis and Metabolic Diseases (N.I.A.M.D.) as one of the National Institutes of Health in Bethesda, Maryland. In Canada the first national fund campaign by the C.A.R.S. in 1950 realized the sum of \$157,000. Ten years later, in 1960, the proceeds of this campaign had increased more than sevenfold, to a total of \$1,100,000. Early efforts at fund raising for similar purposes in the United States netted but \$1200 in 1938. Today through the A.R.F. and N.I.A.M.D. programs, the Helen Hay Whitney Foundation, the National Foundation (formerly the National Foundation for Infantile Paralysis) and numerous special gifts, the funds annually available for clinical training, teaching, lay education, basic research and general organization of the campaign against rheumatism are in the range of millions of dollars.

An increasing number of investigators, projects and new questions to be answered reflect the value of these programs that are aimed at better understanding, control, and, it is to be hoped, ultimate elimination of the rheumatic diseases. Specialty periodicals such as *Arthritis and Rheumatism* and the *Bulletin on Rheumatic Diseases* in North America, and the *Annals of the Rheumatic Diseases* in Britain, disseminate the increasing volume of clinical and basic science information to investigators and others interested in this field.

Despite these salutary developments, the expanding field of rheumatology needs more trained workers. As the need for such personnel has increased, more clinical and research fellowships have become available in the past decade, providing opportunities for training in clinical and research methods, for academic positions, and for the establishment of arthritis clinics in community hospitals. The doctor working in this area of practice encounters patients of all age groups, from children with juvenile rheumatoid arthritis or rheumatic fever to elderly persons with degenerative joint disease of the later years of life. The physician responsible for their care requires a well-rounded training; the concept of the "whole patient" applies in the management of the specialized disorders encountered in rheumatic patients as it should in the case of any other affliction.

Over fifty institutions now sponsor training in the rheumatic diseases in the United States and Canada, and a comparable number of fellowships for clinical training and for basic research is now available at leading medical centres in the United States through the various foundations already mentioned.

Information concerning fellowships and grants available to Canadians for training in Canada or

other countries may be obtained from the Professors of Medicine of Canadian medical schools or from the National Office of the Canadian Arthritis and Rheumatism Society at 900 Yonge St., Toronto.

In the United States, Dr. Ronald W. Lamont-Havers, Medical Director of the Arthritis and Rheumatism Foundation (10 Columbus Circle, New York 19), in conjunction with an American-Canadian Committee on Opportunities in Rheumatology, under the able and energetic chairmanship of Professor John Lansbury of Philadelphia, has prepared a booklet, *Information on Fellowships in the Rheumatic Diseases*, which lists the numerous opportunities for this "specialty with a future". Dr. Lamont-Havers' office will function as a permanent bureau to deal with inquiries concerning training opportunities that are available in this field of medicine in the United States, some, though not all, of which are open to Canadian applicants.

A SIMPLIFIED METHOD OF DISTINGUISHING MEGALOBLASTIC ANEMIAS

THE presence of intrinsic factor deficiency is an indication for lifetime treatment with vitamin B₁₂. However, if the patient suffers from a megaloblastic anemia due to folic acid deficiency or to some other cause, such treatment need not necessarily be continued for an indefinite period. The most convincing evidence of intrinsic factor deficiency is provided by the demonstration of histamine-refractory achylia. Further differentiation is possible if it is borne in mind that subacute combined degeneration occurs only in vitamin B₁₂ deficiency and not in patients with deficiency of folic acid, so that patients with neurological disturbances must be considered, *a priori*, as being vitamin B₁₂ deficient. Estimations of blood levels of vitamin B₁₂ and folic acid, and performance of the Schilling test, are possible only in special laboratories. An alternative method of differentiating the megaloblastic anemia of vitamin B₁₂ deficiency from that of folic acid deficiency, as described by Marshall and Jandl (*A.M.A. Arch. Int. Med.*, 105: 352, 1960), is a simple procedure that can be carried out in the physician's office. It consists of daily administration of 0.4 mg. folic acid intramuscularly for four to six days. In the presence of folic acid deficiency a marked rise in reticulocytes will be observed, whereas in true B₁₂ deficiency states such small doses of folic acid will not produce a reticulocyte response. It must be borne in mind, however, that massive doses of folic acid, of the order of 150 mg., can produce a typical reticulocyte increase even in patients with true vitamin B₁₂ deficiency (C. Maier, *Schweiz. med. Wchnschr.*, 91: 639, 1961).

W.G.

Letter to the Journal

THE POSITIVE SIGNS OF NEUROSIS

To the Editor:

You are to be congratulated for publishing the recent letter, presumably unrevised and unexpurgated, from Dr. Eva P. Lester (*Canad. M. A. J.*, 85: 315, 1961). Any doubts about the scientific importance and educational value of "The Positive Signs of Neurosis" (T. F. Rose, *Ibid.*, 84, 1132, 1961) have been dispelled.

This may not have been Dr. Lester's intent but it is certainly what she has achieved. For that alone, your readers owe her a debt. Many will want to read (if not re-read) Dr. Rose's article. They will not be disappointed, for here is an essay whose literary qualities are seen rarely in a medical journal and not, certainly, in the above-mentioned letter. The original

article presented the quiet reflections of a competent physician. No pretentiousness is to be found there; no scurrying around in nosological mazes. But even with Dr. Rose's tendency to "under-write", there is more depth of knowledge there than Dr. Lester gives credit for. One reads of the results of prolonged and intense observation which must be based on a sense of altruism and dedication in such a physician. His fortunate patients can only benefit from such qualities.

In due course, your readers may benefit from more of Dr. Rose. So, too, could Dr. Lester, if, during her quest for knowledge, she acquired a sense of humour.

DOUGLAS B. GUEST, M.D.

117 Raglan St. S.,
Renfrew, Ont.

MEDICAL NEWS IN BRIEF

THE DWINDLING INDICATIONS FOR STREPTOMYCIN IN PEDIATRIC PRACTICE

A recent editorial in *Antibiotic Medicine and Clinical Therapy* (8: 73, 1961) reviews the great change which has taken place in the therapeutic use of streptomycin in the past decade. Before the advent of the broad-spectrum antibiotics, streptomycin was used in the treatment of Gram-negative bacterial infections in the pediatric age group. It was valuable in the treatment of *Hemophilus influenzae* meningitis and septicemia, urinary tract infections due to Gram-negative bacilli as well as tularemia and brucellosis. With the availability of the newer antibiotics such as the tetracyclines and chloramphenicol, the value of streptomycin has been seriously curtailed. In all of the diseases in which this drug was once used, such as *H. influenzae* meningitis, urinary tract infections with *Pseudomonas aeruginosa*, *Shigella* enteritis and salmonellosis, other antibiotics or combinations of antibiotics are now more effective.

The combination of penicillin and streptomycin is still used far more often than is compatible with good practice. The fixed combination of these two drugs has an amount of streptomycin (0.5 g.) that is too large for use in infants and young children when one is estimating the dose on the basis of the quantity of penicillin G (400,000 units of procaine aqueous penicillin per c.c.). In the uncommon situation in which one does use streptomycin in infants, it should be given according to body weight, 20-40 mg./kg., separate and distinct from any other antibiotic. Fixed combinations of penicillin and streptomycin are definitely contraindicated in the pediatric age group. In the author's opinion, the bona fide indications for the use of streptomycin in infants and children, with the exception of tuberculosis, are now so rare that the drug

may become of historical importance only, in pediatric practice.

CARPAL TUNNEL SYNDROME—INITIAL MANIFESTATION OF SYSTEMIC DISEASE

Grossman *et al.* have recorded three cases in each of which the carpal tunnel syndrome with median nerve involvement represented three distinct entities, each a generalized systemic disorder (*J. A. M. A.*, 176: 259, 1961). Severe pain and paresthesias in the hands were the features common to the three cases. In the first patient, a 55-year-old woman, median neuropathy was the first indication of rheumatoid arthritis, and neurolysis at the right wrist gave immediate relief of pain. In the second patient, a 51-year-old man, the diagnosis proved to be gouty arthritis, and the decompression of the median nerve, which relieved symptoms in the right hand, revealed tophaceous deposits. In the third patient, a 63-year-old man, decompression of the median nerves at the wrists promptly relieved pain completely in both hands; biopsy of material obtained at operation confirmed the diagnosis of multiple myeloma. In the patients with rheumatoid arthritis and multiple myeloma, the symptoms referable to the median neuropathy preceded all other manifestations of systemic disease.

Recognition of the carpal tunnel syndrome in each of the three cases helped to settle the diagnosis and led to relief by surgery from severe prolonged suffering.

It appears that the carpal tunnel syndrome in the absence of true osseous disease at the wrist is more frequent than was formerly thought, and that probably in the future other systemic diseases will be found to be associated with this syndrome.

(Continued on advertising page 34)

ASSOCIATION NOTES

THE MEDICO-LAY AFFILIATES OF THE CANADIAN MEDICAL ASSOCIATION CANADIAN CANCER SOCIETY

R. M. TAYLOR, M.D., *Executive Vice-President*

[This is the ninth of a series of articles describing the organization and work of the voluntary health agencies and other medico-lay bodies affiliated with the Canadian Medical Association.]

THE Canadian Cancer Society was organized as a lay organization in 1938. Although the immediate movers were members of the Canadian Medical Association, the Society was born as a result of a pan-Commonwealth movement, started in 1935, to raise money for cancer control. In this country the movement was called the King George V Silver Jubilee Cancer Fund for Canada, chairman of which was Lady Bessborough, wife of the Governor-General. Similar appeals were held at the same time in South Africa, Australia and the United Kingdom.

In 1937 the Canadian Medical Association assumed two responsibilities: to set up within its own organization a department of cancer control, and to organize a Canadian Society for the Control of Cancer. The latter was granted a charter in 1938, and this was the name of the organization until 1946 when it was simplified to "The Canadian Cancer Society".

Dr. C. C. Ross was appointed the Society's first secretary, and it was his responsibility to cement into a permanent organization the cancer committees set up in each province by the C.M.A.'s General Secretary, Dr. T. C. Routley, and by the chairman of the Association's Study Committee on Cancer, Dr. J. S. McEachern.

By the end of 1938 the committee could report that "an active cancer committee has been established in each province." The work of the Society was confined to public education on cancer and service to cancer patients. By January of 1947, however, it had become obvious to Canadian scientists and cancer control authorities that there was a need for co-ordination and increased effort in the field of cancer research. That month, therefore, a meeting of 39 medical, scientific and social welfare people met in Ottawa and founded the National Cancer Institute of Canada. While maintaining its independence from the Society, the Institute was to become in effect its research arm. The bulk of its funds would come from the annual appeals made by the Society, to be augmented by whatever government grants might be obtained. Today about 80% of the Institute's finances is provided by the Society whose role, since 1947, has been three-fold:

(a) Supporting research on the etiology and eventual cure or control of cancer.

(b) Educating the public on the recognition of cancer symptoms and the importance of early diagnosis and treatment.

(c) Providing assistance to needy cancer patients being cared for at home.

The two bodies are affiliated for administrative purposes in one office at 790 Bay Street, Toronto, under one executive officer, Dr. R. M. Taylor. From 1947 until 1960 a total of \$8,847,126 has been provided by the Society for cancer research in the form of sums turned over to the Institute, in capital grants for construction of research facilities and of equipment.

Although the Society has a national office and permanent staff therein, it is essentially a volunteer organization embracing some 90,000 volunteer workers throughout Canada. Each province is organized into a division, under which units or sub-units operate. There are 1509 such units in as many communities, scattered through the ten provinces and the Yukon. Some work is done in a further 939 small centres of population. All participate in the Society's annual campaign for funds—its sole source of revenue, apart from bequests. In 1960 income from all sources totalled \$3,760,000. Expenditures totalled \$4,346,000 distributed as follows:

		%
Research and facilities for research	\$2,053,000	47.2
Payments to Provincial Foundations and Clinics	489,000	11.3
Fellowships	62,800	1.4
Cancer education	575,500	13.3
Cancer welfare service	610,000	14.0
Overhead	336,200	7.7
Cost of raising funds	219,500	5.1
	<hr/> \$4,346,000	<hr/> 100.0

The work of the Society's volunteers is most apparent just prior to and during the campaigns, but its education and welfare service functions are year-round activities. In 1954 and in 1960 the effectiveness of the Society's public education effort was tested by professionally conducted national polls to determine the opinions about and knowledge of cancer on the part of Canadian women. These polls have proved to the satisfaction of the Society's officers that such education is effective and cumulative. In 1954, 63% of those questioned knew that cancer is not necessarily incurable; in 1960 this percentage had risen to 71. The percentage of women realizing the necessity of early treatment of cancer likewise rose during the same period from 80% to 87%.

The Society maintains its liaison with the medical profession by means of medical advisory groups at both unit and divisional levels, and by including medical personnel on its National Board of Directors and Standing Committees.

Members of the Canadian Cancer Society see its essential function as providing the means by which a real contribution to the defeat of cancer

can be made. They consider that when this has been accomplished, their task will be done. They see evidence that already important steps in this long and gigantic world-wide undertaking have been made because of the existence and work of the Society, and look forward to the day when their organization will no longer be required.

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CANADA

INVITATION TO CERTIFICATED SPECIALISTS OF THE ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CANADA TO ATTEND THE 1962 ANNUAL MEETING OF THE COLLEGE

In 1959, the College, in keeping with a policy of expanded educational opportunities for Fellows and certificated specialists, embarked on a program of Regional Scientific Meetings, which Fellows and certificated specialists living in the designated region have been invited to attend.

At the 1961 Annual Meeting of the College held in Ottawa, certificated specialists in the immediate local area were invited to attend the scientific program sessions.

Because of the larger meeting-room accommodation available in Toronto, the Council of the College has decided to extend an invitation to all certificated specialists of The Royal College to attend the scientific sessions at the 1962 Annual Meeting, to be held at the Royal York Hotel, Toronto, from January 18 to 20.

Certificated specialists wishing to attend this meeting must complete the attached registration application form and return it to The Secretary, The Royal College of Physicians and Surgeons of Canada, 74 Stanley Avenue, Ottawa 2, Ontario, together with a cheque or money order in payment of the Registration Fee of \$15.00, made payable to the Royal College of Physicians and Surgeons of Canada. In order to facilitate planning for adequate accommodation, registration applications should be forwarded by December 15 at the latest.

A summary of the scientific program will be published in the Journal in mid-December. Certificated specialists who have registered to attend the meeting will also be sent a copy of the printed program at that time.

The Secretary,
The Royal College of Physicians and Surgeons of Canada,
74 Stanley Avenue,
Ottawa 2, Ontario.

I desire to register to attend the Scientific Sessions of the Annual Meeting of The Royal College of Physicians and Surgeons of Canada to be held at the Royal York Hotel, Toronto, January 18, 19 and 20, 1962.

Enclosed is a cheque/money order in the amount of \$15.00 in payment of the Registration Fee.

Name of Certificant:.....

Address:.....

Name of Specialty:.....

(please print)

BOOK REVIEWS

THE FIXED ERUPTION. A Possible Hazard of Modern Drug Therapy. Ashton L. Welsh. 248 pp. Charles C Thomas, Springfield, Ill., 1961. \$9.75.

The subtitle to this interesting volume, "A Possible Hazard of Modern Drug Therapy", emphasizes that this is no mere exotic item of interest to dermatologists but rather that there is a problem of increasing importance which must concern all physicians responsible for the prescribing of any drug. The preparation of this monograph was undertaken for the purpose of compiling in a readily available single source all pertinent information regarding fixed eruptions. Probably no better qualified author could be found than Dr. Welsh, who has already gained renown by his previously published encyclopedic treatises on pharmacologic agents used in dermatology and on the psychotherapeutic drugs.

This book does not provide a discussion of the entire aspect of cutaneous lesions due to drugs, but only of the quite restricted field of *fixed eruptions*, which are sharply circumscribed plaques produced in susceptible persons by certain chemicals acting within the body. "Fixed eruptions are visible manifestations of localized tissue hypersensitivity, having no apparent connection with familial or constitutional tendencies, local or general disease, pathological or physical states."

These fixed eruptions are certainly not common, but they occur with sufficient frequency to be of practical importance and cosmetic distress. The author has attempted to describe such eruptions by recording his own experiences and by citing from the available medical literature. A magnificent 28-page bibliography is included in the text. The book is organized by chapters which are devoted to discussion of these major groups of drugs: antipyretics, laxatives and dyes, antisyphilitic drugs, central nervous system depressants, gums, oleoresins and enzymes, anti-infective agents, autonomic drugs, cardiovascular therapeutic agents, unclassified drugs and chemicals, and substances other than drugs.

This is an essential reference book for any medical library, and should be available in all departments of medicine, dermatology and pharmacology.

SCHOOL HEALTH AND HEALTH EDUCATION. 4th ed. C. E. Turner, C. Morley Sellery and Sara Louise Smith. 481 pp. Illust. The C. V. Mosby Company, St. Louis, Mo., 1961. \$5.00.

Doctors should read this book. It is a typical presentation, better than some others, of the educator's conception of health education, a subject that the medical profession let slip through its fingers about 80 years ago. Since its beginning in the 19th century, this subject has been almost continuously in the hands of well-meaning people who lack the required knowledge of the subject that would make it reasonable and give it balance.

This book is written "for teachers and school health personnel" by two health educators and a former director of health services for Los Angeles schools. A brief historical treatment is followed by a discussion of some major health problems and the place of school education and community effort in their prevention or solution.

Most of the book has to do with "school health and health education in action"; the school health team, the well child, common departures from health, school health services, communicable disease control, the healthful school environment, mental health, family life and sex education, physical education, accident prevention, and curriculum and course of study, methods of teaching health and methods of evaluation. Two appendices list 167 specific health education objectives and some first-aid techniques.

This reviewer reads books of this kind with mixed feelings. The authors present the case for an active health program in elementary and high schools. Like most educators, they consider the subject to be of prime importance in the school curriculum. They place laudable emphasis on the necessity of a co-ordinated effort on the part of classroom teachers, the school system administration and those directly concerned with health services. It is refreshing to find them advocating the use of microscopes and culture plates in the classroom.

However, the multiplicity of desirable health aims and objectives, skills, appreciations and habits listed seem ethereal indeed when one considers the situation in most schools. The key figure in this "health team" is the classroom teacher. The authors assume, as do all education administrators, that the teacher has sufficient knowledge of the subject to teach it well. Through no fault of the teacher this is far from the truth, and he or she is forced to rely on the school health textbooks for much of the subject matter of the course. It is doubtful if any other class of textbook has been in such a deplorable state during the last thirty years, yet new authors and new editions appear annually and are blithely recommended by authors such as Turner *et al.* and by provincial departments of education.

The time has come when the medical profession should insist that it have a decisive influence on what is now taught under the label of "health" in schools. Who knows, it may be in the best interests of the profession that it should do so.

X-RAYS, THEIR ORIGIN, DOSAGE, AND PRACTICAL APPLICATION. 8th ed. W. Schall. 348 pp. Illust. John Wright & Sons Ltd., Bristol; The Macmillan Company of Canada Limited, Toronto, 1961. \$8.50.

This book is a revised and very modern edition of one which has been in print since 1923 and is primarily directed toward the training of radiographers and x-ray technicians. Those who may have been involved in the training of x-ray technicians in this country might be surprised at the volume and depth of material with which British radiographers are expected to be familiar.

The book covers the basic aspects of physics and the electrical aspects of x-ray equipment. High energy machinery including such esoteric items as betatrons, cyclotrons and linear accelerators are discussed. There are two chapters on radiation physics and radiation detecting devices. The practical applications of x-rays in medical diagnostic and therapeutic radiology and in industrial radiology are covered in the remaining five chapters.

(Continued on page 618)

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1. Correction of menstrual dysfunction. Cyclic therapy with ENOVID controls dysfunctional uterine bleeding (menorrhagia, metrorrhagia) and often establishes a normal menstrual cycle in amenorrhea.

2. Ovulation suppression (to suspend fertility). For this purpose ENOVID is administered cyclically, beginning on day 5 through day 24 (20 daily doses). The ovary remains in a state of physiologic rest and there is no impairment of subsequent fertility.

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Basic dosage of ENOVID is 5 mg. daily in cyclic therapy, beginning on day 5 through day 24 (20 daily doses). Higher doses may be used with complete safety to prevent or control occasional "spotting" or breakthrough bleeding during ENOVID therapy, or for rapid effect in emergency treatment of dysfunctional bleeding and threatened abortion. ENOVID is available in tablets of 5 mg. and 10 mg. Literature and references, covering over five years of intensive clinical study, available on request.

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From the beginning, woman has been a vassal to the temporal demands—and frequently the aberrations—of the cyclic mechanism of her reproductive system. Now, to a degree heretofore unknown, she is permitted normalization, enhancement, or suspension of cyclic function and procreative potential. This new physiologic control is symbolized in an illustration borrowed from ancient Greek mythology—Andromeda freed from her chains.

(Continued from page 616)

The radiologist in training will find this a very useful book, covering as it does a wide variety of material not ordinarily found in one book. Those involved in training x-ray technicians will find selected parts of it most valuable. It is a book which should be in the library of every radiology department.

MEMORY LEARNING AND LANGUAGE. *The Physical Basis of Mind.* University of Saskatchewan Jubilee Symposium. Edited by William Feindel. 69 pp. Illust. The University of Toronto Press, Toronto, 1960. \$2.00.

This handsomely produced book contains essays given as lectures in a symposium arranged as part of the jubilee celebrations of the University of Saskatchewan. This symposium had the stated purpose of "cutting across some of the lines dividing various disciplines all having a common interest in different aspects of the functioning of the brain".

The introductory chapter presents a short sketch of historical theories relating to memory functions. An outline of elementary brain physiology, a review of some hallucinogenic drugs, a description of a self-regulating machine, a discussion of mechanization of thought processes, and finally a discourse on biological mechanisms of speech, are the subsequent chapters constituting this volume. Each chapter was written by a different author, a distinguished expert in the specific field.

All of these essays are very readable. They show a pleasant blending of literary wit and scholarly knowledge, attuned to the solemn occasion of their original presentation to a mixed audience. As each lecture was destined to inform the educated layman, it is evident that the medical reader will benefit from the chapters on mechanical autoregulation and computer principles, written by scientists in engineering. Reciprocally the essays on medical subjects would be very informative for the layman in these fields.

ATLAS AND DEMONSTRATION TECHNIQUE OF THE GENERAL NERVOUS SYSTEM. James B. McCormick. 99 pp. Illust. Charles C Thomas, Springfield, Ill., 1961. \$11.25.

As stated in the preface by the author, the purpose of this atlas is to "provide an organized method of anatomical study of the central nervous system", the material being "organized and particularly oriented to the eye and requirements of the general pathologist". Unfortunately, the atlas fails to achieve these very worthwhile aims. The first nine pages are devoted to technical details of removal of the central nervous system at autopsy. These useful instructions could have been made more complete by mentioning the importance of examination of the vessels feeding the brain, and of the dura in the newborn. On the next four pages, the author describes the method of embedding the whole brain in gelatin-plastic and preparing from it sections vacuum-packed in plastic bags. This procedure may be of value as a museum technique, but it can hardly be recommended as a daily routine in an autopsy service of a general hospital. In order to discover the lesions and to investigate them to the best advantage, the pathologist must use various approaches, various directions of cuts and various methods of dissection.

The last part of the book (85 pages) consists of an atlas of cross-sections of the brain and spinal cord,

preceded by three semi-diagrammatic drawings showing the anatomical landmarks of the surface of the brain. The mesial surface is not shown at all, and the illustrations of the ventral surface have certain important omissions. The cross-sections of the cerebral hemispheres and brain stem are drawings and not photographs. Those depicting the cross-sections of the brain stem are accompanied by diagrams which are very inaccurate. No cross-sections of the midbrain are shown. The labelling is in Latin. There are several misprints. The use of space is very uneconomical, some pages having only two words printed on them. There are no references.

The literature is still lacking a comprehensive and compact manual of neuropathological techniques intended for the use of general pathologists, for this atlas does not fill the gap.

HEMATOLOGY IN PRACTICE. Steven O. Schwartz, Wilson H. Hartz, and Joseph H. Robbins. 329 pp. Illust. The Blakiston Division, McGraw-Hill Book Company, Inc., Toronto, 1961. \$14.00.

The authors' purpose in preparing this book was to give direction to the practising physician at the bedside, and it is designed as a practical reference, to the point of deliberately omitting a bibliography. The book grew out of a course of lectures, and reflects the extensive clinical experience at Cook County Hospital.

The book is moderate in size, and is divided into three parts. The first is a brief diagnostic approach to the study of the patient with anemia, the patient with lymphadenopathy and splenomegaly, and the patient with abnormal bleeding or bruising. The indications for bone marrow examination are listed, as is the technique of marrow puncture. The second part forms the bulk of this work, and consists of descriptions of the various blood disorders that are met with in practice, including less common ones such as porphyria, hypogammaglobulinemia and elliptocytosis. The final section on hemostasis is brief but adequate. There are numerous illustrations in black and white, chiefly radiographs and clinical photographs, and a few photomicrographs of blood films to show abnormal erythrocytes. An interesting feature is the use of line drawings to depict the size of the liver and spleen, and the presence of enlarged lymph nodes; this is a useful graphic device commonly employed by hematologists.

It is pointed out by the authors that hematology is a clinical discipline, but clearly it cannot be divorced altogether from the laboratory. There is no section of the book that deals with techniques, but laboratory data are discussed and interpreted. In classifying the anemias, the authors have used the "colour index" to distinguish hypochromic from hyperchromic and normochromic anemias. As this index depends on an accurate red cell count, most hematologists have preferred to measure the mean corpuscular hemoglobin concentration and mean corpuscular volume.

Treatment is considered in detail, and the book will prove particularly useful to physicians in this respect. Not all hematologists will agree, however, with the author's choice of urethane as the preferred drug in treating both chronic myelocytic and lymphocytic leukemias.

This volume is recommended to physicians engaged in the practice of internal medicine, and especially to the resident staff in hospitals.

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Reference:

Intravenous Heparin—its role in the Management of Acute
Thromboembolic Diseases.

W. Ford Connell and George A. Mayer
Applied Therapeutics, May 1960, Vol. 2, No. 5, 371-375.



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1. Stephens, V. C., *et al.*: J. Am. Pharm. A. (Scient. Ed.), 48:620, 1959.
2. Griffith, R. S.: Antibiotic Med. & Clin. Therapy, 1:320 (May), 1960.
3. Kuder, H. V.: Clin. Pharmacol. & Therap., in press.

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GENERAL PRACTICE RESIDENTS, registered nurses, registered nurse anesthetists wanted by 90-bed general hospital in metropolitan Detroit area fully accredited, with approved general practice residency and affiliation with Wayne State University Medical School. Most cordial staff relations. Salaries: residents — \$500 with full maintenance plus bonus of \$50 or more depending on emergency room services; nurses \$400; nurse anesthetists \$550 plus extra pay for calls and overtime; technicians \$400 to \$475. Please reply with details and references to Box 592, CMA Journal, 150 St. George Street, Toronto 5, Ontario.

ASSOCIATE PATHOLOGIST.—Immediate opening, 200 bed acute disease children's hospital; university affiliated residencies; excellent opportunity for contribution to service, teaching, and research programs in developing medical center. Board eligible or certified. Write Dr. S. A. Creighton, Children's Orthopedic Hospital, Seattle, Washington, U.S.A.

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WANTED, MEDICAL DOCTOR to serve the community of Carstairs, Alberta, with a trading population of approximately 4000. Practice recently vacated. Office building available for rental. Address enquiries to George Andrews, Secretary Chamber of Commerce, Carstairs, Alta.

ASSISTANT REQUIRED for busy general practice north-western Ontario. Good fishing, hunting and winter sports. House available. Starting salary \$650 monthly, car allowance and sick benefits. Duties begin Sept. 15 or Oct. 15. Alternate nights and week-ends free. Reply to Box 578, CMA Journal, 150 St. George Street, Toronto 5, Ont.

OREGON needs psychiatrists for new 460-bed hospital near Portland. Salary range \$13,320 to \$15,420. Write: Superintendent, Dammasch State Hospital, Wilsonville, Oregon, U.S.A.

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LOCUM REQUIRED.—3 months Sept. Oct. Nov. or Oct., Nov., Dec. 1961. \$600 per month and expenses, in Saskatchewan South-east corner of province. Reply to Box 610, CMA Journal, 150 St. George Street, Toronto 5, Ont.

LOCUM WANTED three-six months immediately, to join 3-man general practice in north Toronto, hospital privileges available, prefer young married man. Reply to Box 611, CMA Journal, 150 St. George Street, Toronto 5, Ont.

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NOTE: To avoid the publication of misleading information, all advertisers under the classification "Practices" in the Canadian Medical Association Journal should furnish the following information:

Population of community and surrounding territory served.

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FOR SALE.—Doctor's house and fully-equipped office for sale in southern Ontario village with good rural practice. Nearest doctor and hospital seventeen miles. House in good condition. Gross income for 1960 over \$30,000. Leaving for personal reasons. Introduction of one month if desired. Reply to Box 556, CMA Journal, 150 St. George Street, Toronto 5, Ont.

PRACTICE FOR SALE in northern Ontario community of 2000, 90% of whom are medically insured. Nearest doctor 84 miles away. The town is on main C.N.R. line. There is a five-bed Red Cross hospital in the town which is used for confinements and minor surgery. The hospital also contains three bassinets. A 15-bed hospital is under construction and will be completed in the fall. The practice will gross between \$18,000 and \$20,000 in first year and is capable of expansion. In the immediate vicinity there is excellent hunting and fishing in virgin territory. There is an access road, half paved, half gravel, leading to a larger medical centre where more definitive patient care can be carried out. A large house and office combined is available for nominal rent. This would be ideal for young graduate or a husband-wife physician team. Price asked for records and new medical equipment \$5000. Terms can be arranged. Please reply to Box 615, CMA Journal, 150 St. George Street, Toronto 5, Ont.

Residencies and Internships

FIRST YEAR RESIDENT IN OB-GYN, starting immediately or January 1, 1962. Stipend and maintenance. Canadian schools or certified by ECFMG. Write Paul O. Funk, M.D., Director of Medical Education, Saint Ann Hospital, 2475 East Boulevard, Cleveland 20, Ohio, U.S.A.

PATHOLOGY RESIDENCY.—4 year approved program in pathologic anatomy and clinical pathology supervised by four pathologists, two biochemists and bacteriologist. 710-bed hospital, over 6000 surgical and 400 autopsies. Opportunities for research in ultra-micro chemistry and new diagnostic methods; animal research facilities under construction. Apply: Edwin M. Knights, Jr., M.D., Pathology Department, Hurly Hospital, Flint 2, Michigan, U.S.A.

WESTERN CANADA.—Residents and assistant-residents in diagnostic radiology required January 1, 1962 and July 1, 1962. 800-bed hospital. All forms of standard and specialized radiological procedures. Active teaching unit. Stipend \$400 monthly for resident and \$300 for assistant. Training fully recognized by Royal College of Physicians and Surgeons of Canada. Applications to Director of Radiology, Regina, General Hospital, Regina, Sask.

PSYCHIATRIC RESIDENCIES.—Hospital with large medical staff offers fully accredited three-year training program beginning July 1, 1962 for men and women graduates of Canadian or American schools desiring certification in psychiatry. Includes postgraduate course, guest lectures, training in modern therapeutic procedures and supervised work in mental hygiene clinics. Liberal salary includes family maintenance. Reply to Box 603, CMA Journal, 150 St. George Street, Toronto 5, Ont.

OBS-GYN Residency. Two appointments available at first or second year level in 3-year approved program. Excellent accommodations for family. Resort area. Stipend \$250 month plus maintenance. Lawrence and Memorial Hospitals, New London, Connecticut, U.S.A.

STATE OF CONNECTICUT, FAIRFIELD STATE HOSPITAL, NEWTOWN, CONN., U.S.A.—Residents in psychiatry. Applications are invited from men and women graduates of Canadian medical schools for residency training in psychiatry. Large modern hospital with three-year training accreditation for American board certification. Active and varied teaching program in affiliation with Yale University. Close to metropolitan areas. Maintenance at nominal cost immediately available for single applicants, waiting list for family accommodations. Beginning stipend \$455 per month. Write giving particulars to Jane E. Oltman, M.D., Director of Training.

RESIDENT IN ANESTHESIA WANTED JANUARY 1, 1962, for the recently reconstructed 270-bed Queen Elizabeth Hospital of Montreal. Approved for postgraduate training by the Canadian, American and British authorities. Stipend varies with the experience of the applicant from \$200 to \$300 per month, plus room and board or living-out allowances. Apply to Dr. W. G. Cullen, Anesthetist-in-Chief, 2100 Marlowe Avenue, Montreal 28, Quebec.



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Caffeine citrate $\frac{1}{2}$ gr.



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MEDICAL NEWS in brief

(Continued from page 613)

SYMPOSIUM ON CIRCULATION

The St. Boniface General Hospital in co-operation with the University of Manitoba will offer a postgraduate course, "Symposium on Circulation", on November 17 and 18, 1961. The fee is \$20.00. Apply to: Teaching Office, St. Boniface General Hospital, St. Boniface, Manitoba.

CANADIAN CANCER SOCIETY FELLOWSHIPS

Two training fellowships worth \$4200 each have been awarded by the Canadian Cancer Society to Dr. J. G. Goldenberg of Winnipeg and Dr. D. G. Hurteau of Ottawa. A third fellowship worth \$300 was awarded Dr. John M. Holt of Queen's University for two weeks of training in spectrochemical analysis at Boston College.

Dr. Goldenberg's fellowship will finance a year's training in basic science at the University of Minnesota. Dr. Goldenberg graduated from the University of Manitoba Medical School in 1957, ranking first in a class of 49 and winning, along with two other prizes, the University Gold Medal in Medicine. He is 28 and married. For the past three years he has been studying biochemistry at the University of Minnesota, the past two years being financed by an American Cancer Society fellowship.

Dr. Hurteau qualified for his B.A. degree at the University of Ottawa in 1951 and for his medical degree at McGill University in 1955, graduating ninth in a class of 112. His fellowship will finance a year's training in the diagnosis and treatment of gynecological cancer at the Yale Medical Center. He is 32 years of age and married.

Both recipients of these awards, in accordance with the terms of the fellowships, have undertaken to return to Canada, where they will further pursue their interest in cancer.

INSTITUTE OF OPHTHALMOLOGY

The Institute of Ophthalmology of the Americas of the New York Eye and Ear Infirmary announces

that Dr. Joaquin Barraquer, Vice-President of the Institute Barraquer, Barcelona, Spain, will deliver a series of five lectures on "Techniques in Ophthalmic Surgery" from February 5 to 9, 1962. The lectures will be augmented by films and slides, and time will be given for questions from the audience. The fee is \$75.

For registration, apply to Mrs. Tamar Weber, Registrar, Institute of Ophthalmology of the Americas, New York Eye and Ear Infirmary, 218 Second Avenue, New York 3, N.Y.

CHANGES IN THE TUBERCULIN PATTERN IN STUDENTS BETWEEN 1930 AND 1960

Between 1930 and 1940, approximately 60% of the second-year medical students at a large U.S. medical school reacted to 0.1 mg. of old tuberculin and only 20% reacted to 1 mg. There was a gradual reduction over the years in the total number of reactors, with a striking reduction in those reacting to 0.1 mg. and a specific increase in those reacting to 1 mg. By 1959-60, only 7.5% were reactors to five tuberculin units of PPD while 39.1% reacted to 250 tuberculin units of PPD. The literature reveals that this type of change has been occurring in various parts of the United States.

It appears that the success of the tuberculosis control program in the detection and isolation of the disseminators of tubercle bacilli has resulted in both fewer new sub-clinical infections and less frequent exogenous reinfections which formerly served to keep the tuberculin reactions strong. It would be logical to assume that virtually all of the reactors to strong doses of tuberculin were originally infected with human tubercle bacilli, but that their allergy has decreased in the absence of periodic restimulation. It has been shown, however, that many of these weak reactors to human tuberculin give stronger reactions to antigens prepared from avian and Battey mycobacteria. It has been assumed that virtually none of the weak reactors to human tubercle have ever been infected

(Continued on page 37)



NEW NUMBERS FOR P-R-O-L-O-N-G-E-D PAIN RELIEF

The prolonged action of "293" TABLETS protects your patient against sleep-disturbing pain. Especially indicated for bed-time administration, this formulation meets the need for more continuous analgesia by means of a core containing a specific amount of additional codeine for controlled release.

"293" TABLETS

A "292" plus an additional ½ gr. of codeine in a slow-release, pink-coloured core.

Acetylsalicylic acid	3½ gr.	} Gives <u>FAST</u> Relief
Phenacetin	2½ gr.	
Caffeine citrate	½ gr.	
Codeine phosphate	½ gr.	

PLUS

Codeine phosphate	½ gr.	} Gives <u>PROLONGED</u> Relief
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Acetylsalicylic acid	3½ gr.	} Gives <u>FAST</u> Relief
Phenacetin	2½ gr.	
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Codeine phosphate	¼ gr.	

PLUS

Codeine phosphate	¼ gr.	} Gives <u>PROLONGED</u> Relief
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Dosage for "293":

One tablet every 6 to 8 hours as determined by severity and response.

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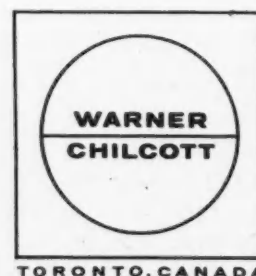
New TEDRAL SA reduces the frequency and severity of asthmatic attacks.

Your patient gets the benefits of sustained protection with the convenience of b.i.d. dosage.

New TEDRAL SA is particularly indicated for patients who need continuous medication over prolonged periods.

RECOMMENDED ADULT DOSAGE: 1 tablet on arising and 1 tablet 12 hours later.

new convenient b.i.d. dosage.



MEDICAL NEWS in brief

(Continued from page 35)

with human tubercle bacilli. Various biologic and epidemiologic facts discussed by Smith *et al.* (*Am. Rev. Resp. Dis.*, 83: 213, 1961) suggest that avian tubercle bacilli may play an important role in this heterologous sensitivity to tuberculin.

FIRST INTERNATIONAL CONFERENCE ON ORAL SURGERY

The First International Conference on Oral Surgery, sponsored by the American Society of Oral Surgeons in conjunction with the Royal College of Surgeons of England, will be held at the Royal College in London, July 1-4, 1962. All interested dentists and physicians are invited to attend, and a bulletin describing the Conference is available on request from the American Society of Oral Surgeons, 840 North Lake Shore Drive, Chicago 11, Ill. The program will include symposia on the temporomandibular joint and on maxillofacial injuries in addition to a wide variety of scientific papers and discussion. Approximately one-half of these papers will be presented by essayists from North, South and Central America and the other half from the United Kingdom, Europe, Africa and Asia. Visitors attending the Conference will also have an opportunity to observe surgical procedures in the hospitals of London as a part of the Conference program.

Extensive social and ladies' programs have been arranged by the Joint British-United States Committee. Features of the social program will be a banquet at London's famed and historic Guildhall and a reception by H. M. Government.

For additional details and bulletins, dentists and physicians in the United Kingdom and Europe should write: Dr. Terence Ward, c/o Royal College of Surgeons, Lincoln's Inn Fields, London, W.C.2. Dentists and physicians in the U.S.A. and other countries should write: Mr. D. C. Trexler, American Society of Oral Surgeons, 840 N. Lake Shore Drive, Chicago, Ill, U.S.A.

A MESSAGE FROM THE DEPARTMENT OF NATIONAL HEALTH AND WELFARE CONCERNING RADIUM LUMINOUS COMPOUND

The recent incident in Toronto, in which children were in contact with powder containing radium, has demonstrated a potential source of hazard, the extent of which is not known.

Radium powder of this kind was used in large quantities during World War II to paint luminous dials in aircraft and other equipment. Some of this material may have been transferred to other establishments before 1947, when the regulations of the Atomic Energy Control Board came into effect. Such material cannot now be acquired except under licence from the Board, and licences are not granted unless the Board is satisfied, on the advice of its health advisers, that the recipient has adequate knowledge and facilities to ensure that no health hazard will result.

It may be that some of the radium powder obtained before 1947 is still stored in industrial establishments, warehouses and similar places. After so many years the material will have virtually lost its usefulness for the painting of luminous dials, but it will remain a potential hazard to health because of its radioactivity.

The Department of National Health and Welfare is therefore

advising all such organizations to check their premises to ascertain whether they have in storage any old stocks of radium luminous compound, and if such material is found, or suspected, to notify immediately: Radiation Protection Division, Department of National Health and Welfare, Ottawa, Ontario. The Division will then make arrangements for proper disposal. It is emphasized that such disposal should not be attempted by other parties.

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY: 66TH ANNUAL MEETING


The American Academy of Ophthalmology and Otolaryngology will hold its 66th annual meeting in Chicago at the Palmer House, October 8 to 13.

More than 6000 eye, ear, nose, and throat physicians from all over the United States, and many from other countries, will meet to hear scientific papers, view exhibits and motion pictures, and participate in instructional courses.

Dr. Dohrmann K. Pischel of San Francisco, president of the Academy, will preside over the meeting. Dr. William L. Benedict of Rochester, Minnesota, is executive secretary-treasurer.

Further information from: American Academy of Ophthalmology and Otolaryngology, 2031 Locust St., Philadelphia 3, Pa.


(Continued on page 41)



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FOR INSOMNIA

Plexonal Forte provides restful, refreshing sleep because it combines the advantages of central and autonomic sedation.



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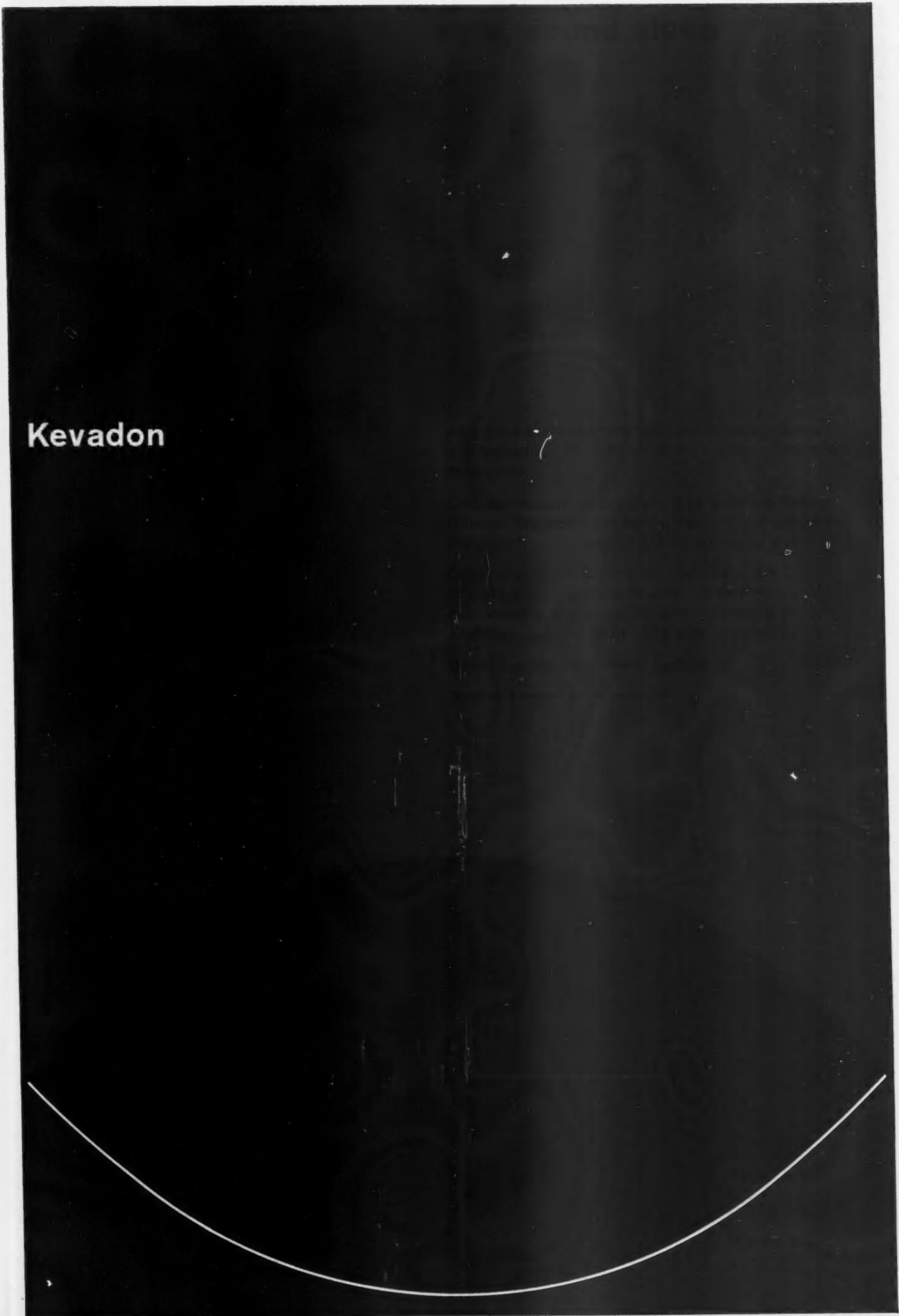
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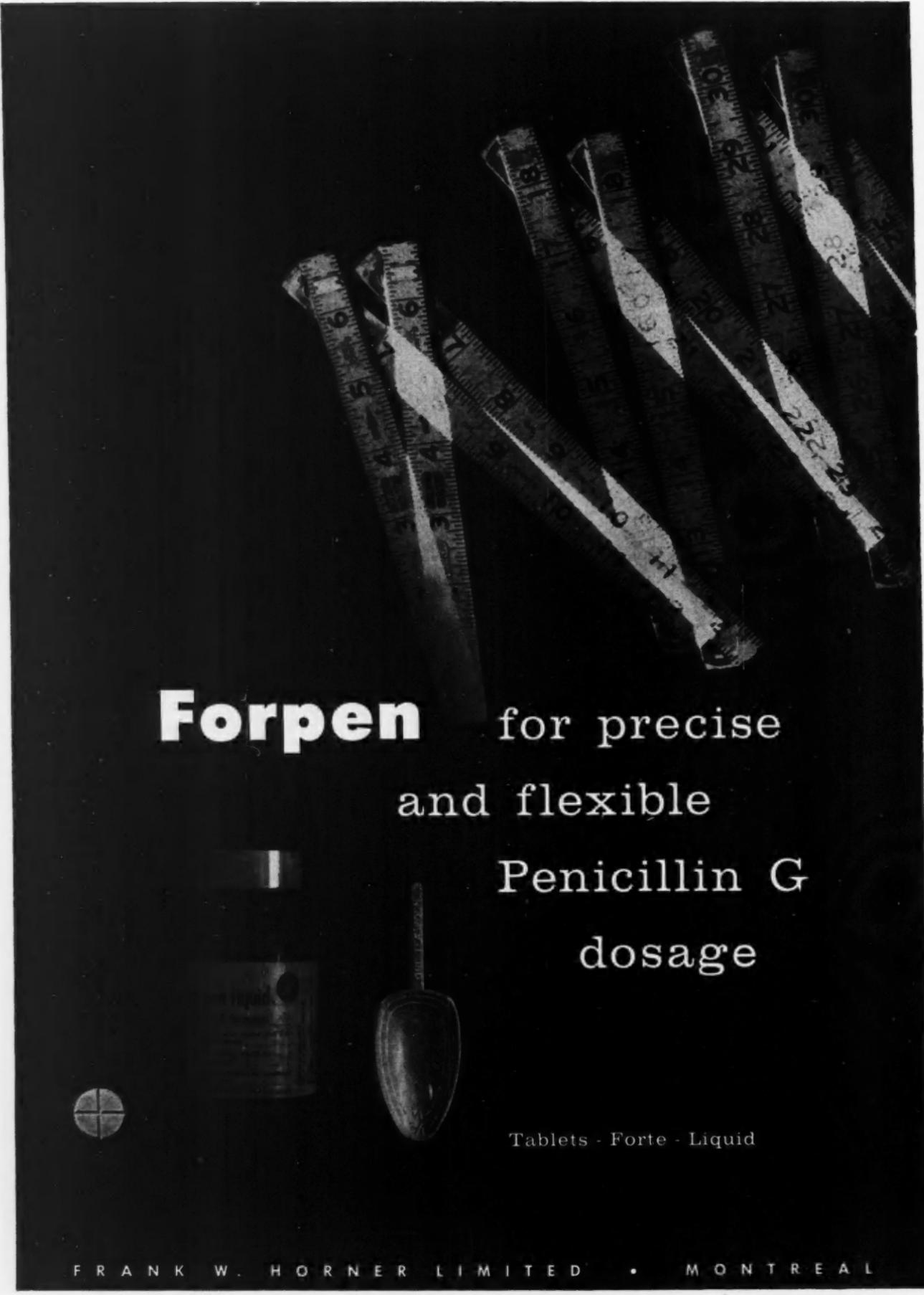
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MEDICAL NEWS in brief

(Continued from page 37)

POSTGRADUATE COURSE IN MINOR SURGERY AND OFFICE ORTHOPEDICS, UNIVERSITY OF BUFFALO

The University of Buffalo will offer a postgraduate course on minor surgery and office orthopedics on October 25 and 26. This course is designed for general physicians who wish to be informed of recent developments in the management of minor surgical and office orthopedic problems. Case presentations and demonstrations of techniques will be utilized to present the more common conditions seen in the physician's office. The tuition fee is \$30.00. Applications should be addressed to: Mary A. Lorenz, R.R.L., Department of Postgraduate Education, University of Buffalo School of Medicine, 3435 Main St., Buffalo 4, N.Y., U.S.A.

DEATH RATE FROM LEUKEMIA IN SWITZERLAND

A statistical study by Schinz and Reich (*Deutsche med. Wchnschr.*, 86: 528, 1961) revealed that the death rate from leukemia in Switzerland has increased considerably since 1931. Whereas between 1931 and 1934 the average yearly death rate was 101 (58 men and 43 women) per 100,000, it rose to 284 (161 men and 123 women) from 1955 to 1958. Chronic myelogenous leukemia occurred more frequently than lymphatic leukemia, and the age distribution differed somewhat in these two forms of the disease. Men were more often affected than women. In the acute leukemias the death rate was highest in children up to 14 years of age and lowest in young adults between 20 and 29 years of age.

The investigators believe that better diagnostic methods may account, to some extent, for the rise in the death rate from leukemia, but that radioactive pollution of the atmosphere is a more important factor.

CORTICOTROPIN-INDUCED CHANGES IN THE TUBERCULIN SKIN TEST

A controlled study of the changes induced by corticotropin on the

tuberculin skin reaction has been reported by Salomon and Angel (*Am. Rev. Resp. Dis.*, 83: 235, 1961). All patients had advanced tuberculosis and received triple antimicrobial chemotherapy. In addition, those in the corticotropin-treated group received corticotropin intramuscularly for three months. Statistical comparison of the size of the tuberculin reaction between the corticotropin-treated and control groups prior to treatment and at six weeks, three months, and six months of treatment led to the following conclusions. The systemic administration of corticotropin significantly reduces the size of the tuberculin skin reaction. Among those patients who received corticotropin, the mean induration of the tuberculin reaction was reduced to almost one-half that of the controls; one-third had negative reactions, while all controls were positive. Most of the patients who were negative showed no induration at all. One week after the last of a series of diminishing doses of corticotropin, inhibition of the tuberculin reaction had abated.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next scheduled examination, (Part I) written, will be held in various cities of the United States, Canada, and military centres outside the continental United States on Friday, January 5, 1962.

Case reports are no longer required by this Board to complete the Part I Examination.

In lieu thereof, all applicants and candidates for examination are required to submit a duplicate certified typewritten list of patients dismissed from each hospital during the preceding 12 months. This applies to new applicants, "reopened" candidates, and candidates requesting re-examination in Part I or Part II Examination.

Lists of obstetrical and gynecological patients are to be made separately and must conform in all details to the sample format furnished upon request by the office of the Executive Secretary and Treasurer.

Candidates are no longer required to bring a duplicate list of admissions to the Part II Examination.


Current Bulletins may be obtained by writing to: Robert L. Faulkner, M.D., Executive Secretary and Treasurer, 2105 Adelbert Road, Cleveland 6, Ohio.

TRENDS IN HEALTH COSTS IN U.S.A.

Average costs of the medical services people most often use vary widely. With spotty exceptions, health costs in the U.S.A. have risen 2% to 21% between 1958 and the end of 1960, according to the Health Insurance Institute.

The exceptions appear to glare, but are largely attributable to tech-


(Continued on page 44)



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FOR INSOMNIA

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MEDICAL NEWS in brief

(Continued from page 41)

nical change—medical and statistical—rather than to price change.

Analysis by the Institute of preliminary and unpublished figures on health costs furnished by the U.S. Bureau of Labor Statistics shows the great variability of charges by doctors, hospitals and dentists from one large city to the next.

On the average, a visit to a physician's office in Los Angeles

cost \$6.25 during the last quarter of 1960. In Minneapolis and Cincinnati, the fee averaged \$4.00. In Atlanta it was \$4.24; Boston, \$4.64; Philadelphia, \$4.19; and New York, \$5.50.

In pricing health services in 1960, the B.L.S. worked with a new "market basket". It priced the services of specialists in internal medicine and included their fees in the average costs of physicians' services. In 1958, only general practitioners were included.

Consequently, average fees for 1958 and 1960 are not exactly comparable, but by noting the changes in averages from 1958 to 1959 to 1960, a gauge of the costs of more specialized medical care is provided.

For example, in Chicago office visits in 1958 averaged \$4.33. This went up to \$4.50 in 1959. When the market basket was changed in the last quarter of 1959, the average price rose to \$4.72. So of an increase of 39 cents in the average price, 22 cents was due to a change in the market basket.

Not all exceptions to the general 2% to 21% price rise were in an upward direction. Costs remained unchanged or were up less than 2% for obstetrical care in Boston and Atlanta, for example, and similarly minor adjustments took place for other services elsewhere.

The geographically irregular increase of charges was noted for each service priced.

Hospital costs in Chicago showed the greatest percentage rise (21%) and in Washington, D.C., the lowest (2%), for semiprivate room accommodations. However, average costs in Boston, San Francisco and Los Angeles remain highest in the nation.

Obstetrical fees increased less than 1% in two years in Boston and up to 17% in Chicago. Latest data list an average obstetrical fee ranging from \$111.08 in Cincinnati to \$185 in San Francisco.

The average costs of an appendectomy showed the highest rise of 9% in Minneapolis, going from \$164.29 in 1958 to \$179.17 in 1960. In Philadelphia, the B.L.S. sampled a different group of doctors from those included in 1958 and found that the fee for an appendectomy had decreased by 12% to \$135.83, lowest in the 11-city study.

Charges for tonsillectomy have showed little or no increase since 1958 in cities such as Washington, D.C., Atlanta, Chicago, and St. Louis, and a 19% rise in New York where the average fee is \$105.83 compared to \$69.17 in Washington.

The variability of costs extends to dental service. Dentists in Cincinnati fill two cavities for \$8.00, less than the price of one filling in San Francisco and Los Angeles—Survey of Health Economics (Health Insurance Institute), July 31, 1961.

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RAPID RELIEF IN MINUTES—in 15 minutes^{1,2,3} mean theophylline blood levels are comparable to I. V. aminophylline—so that severe attacks have been terminated in 10 to 30 minutes.^{1,4,5,6} **Note:** With Elixophyllin the patient can learn to abort an attack in its incipient stage.

INHERENT SUSTAINED ACTION—After absorption theophylline is slowly eliminated during a 9-hour period.⁷ Clinically *proved* relief and protection day and night with t.i.d. dosage.^{1,3-6,8,9}

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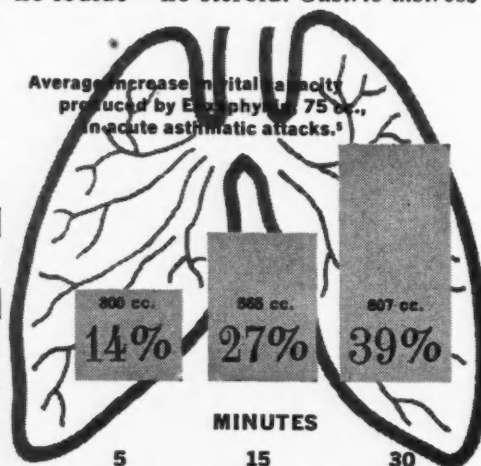
Each tablespoonful (15 cc.) contains theophylline 80 mg. (equivalent to 100 mg. aminophylline) in a hydro-alcoholic vehicle (alcohol 20%).

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